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– ***USA Today***

THE VAULT
**MBA CAREER
BIBLE**

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BIBLE**

VAULT EDITORS

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Introduction

MBA Hiring Overview

So you've spent a few years in business school and (if you're like most B-school grads) a few years in the workforce before that. All of a sudden, you're back on the job market, with a new degree and newer skills, and you want to make sure that they pay off. *Déjà vu?*

Never fear, Vault is here! And so is the best MBA hiring climate in years. According to the 2006 Graduate Management Admission Council (GMAC) Corporate Recruiters Survey, based on the responses of 1,270 recruiters representing 737 companies, recruiters feel better about the state of the economy now than they have since the global economic slump of 2002. That higher confidence means a higher rate of job offers—so candidates, get ready: touch up your resumes, press your suits and prepare to interview!

MBA hiring on the rise

MBA hiring began to strengthen in 2005 and continued to do so in 2006, according to surveys focused on the hiring landscape for new business school graduates. In its annual Corporate Recruiters Survey, published in spring 2006, GMAC found that companies planned to do more MBA hiring in 2006 than in 2005, as measured by planned on-campus recruiting, percentage of new hires expected to be new MBAs and other metrics. Recruiters surveyed expected to sign on 18 percent more MBA-holders in 2006 than in 2005, focusing especially on those with finance and marketing experience. In the future they're going to be looking at more candidates, too: recruiters say that the average number of schools that they visit to troll for candidates should rise from nine to 10.

From internships and recruiting to interviews

For many full-time business school students, on-campus recruiting and summer internships following the first year of are the most important methods of finding employment. According to the aforementioned Corporate Recruiters Survey, 32 percent of MBA graduates recruited in 2005-2006 served as interns at their companies prior to hiring.

But landing a great internship isn't the only way to get your foot in the door—far from it. On-campus recruiting is another fast track to employment, and, as mentioned above, it is on the rise. Of the 1,270 MBA recruiters polled, 87 percent said they planned to visit school campuses to recruit new MBAs (up from 83 percent in 2005). Even more encouraging, according to the 2006 GMAC Global MBA Graduate Survey, more MBA-holders—52 percent of the survey's respondents—were recruited while still in school. In fact, in 2006 survey results, the MBA Career Services Council (MBA CSC) found that fall 2005 and winter 2006 recruiting activity increased at 98 percent of schools surveyed.

And where recruiters go, interviews will follow—check with career services and fairs for dates. While companies usually make presentations and send representatives to business schools throughout the year, actual on-campus interviewing and recruiting tends to be structured on a predictable schedule. Investment banking and consulting firms, which hire large classes of both summer interns and full-time hires from business schools, tend to interview second-year students for full-time positions in October and November, and first-year students for summer internships in January and February. On-campus interviewing for Fortune 1000 companies traditionally happens later, with interviews in March and April for both full-time and internship hiring.

Shaking hands

In addition to a good hiring climate, MBA grads have the advantage of high starting salaries. For example, GMAC reported that 2006 salaries may start at an average base of \$80,809, with benefits and bonuses pushing that sum up to \$99,737. These

numbers are up from 2005, when the average base salary was \$78,040. Signing bonuses are hefty, too: according to GMAC, two-thirds of 2006 job offers to MBA grads averaged \$17,603.

Taking stock

So is the degree worth it? You bet. According to former MBA CSC president Mindy Storrie, "Companies have stepped up recruiting at business schools and MBAs are getting more job offers." The current president of GMAC, David Wilson, agrees: "We have long referred to the MBA as a global currency—a degree that symbolizes value all over the world."

MBA grads concur. According to GMAC's April 2006 MBA Alumni Perspectives Survey, 94 percent of MBA-holders say that getting their degree was the right decision. Among alumni, nearly 75 percent are in management positions, and almost half have been promoted since getting their degrees. So go ahead, grads—get happy and get hired!

Good luck!

The Team at Vault

Choosing Between Summer Internships—Why Not Split 'Em?

Getting summer internships, especially in business school, is incredibly competitive, and the MBA who has two or more tempting internships to choose between is lucky indeed. Most students feel they must choose one over the other, but there is another option. Vault estimates that about one in 10 MBAs split their summer internships—that is, intern at more than one company. In the vast majority of cases, internships are split between companies in different industries, say, consulting and investment banking.

While split summers are still relatively uncommon, the question has arisen often enough for many top firms to establish policies designed to stamp out internship excess, whether these policies be informal or formal. But in many cases, with enough effort, it is still possible to spend your summer doing two separate internships. You won't get any time off during the summer, however—most firms will ask for a minimum of eight or nine weeks, and many will require you spend at least 10 or 12 weeks at the company. Since many business schools have summers lasting only 16-18 weeks, splitting your summer may even require you to take a couple of weeks off from school, either during finals week, the first week or two of your second year, or both. In general, smaller firms and firms in less formal industries, like high tech, will be more open to fitting you in at a time convenient for you, while at most investment banks and consulting firms, the time limitations are likely to be more stringent and the internship programs themselves less flexible.

The pros and cons of splitting

Let's weigh the pros and cons: On the one hand, splitting your summer will allow you an inside look at two different companies or industries, and you'll have two valuable names on your resume. However, remember that internships are, in part, designed to reflect your deep and abiding interest in a particular firm or industry when you go looking for a full-time offer. Splitting your summer may suggest that you lack commitment—not a good sign to hold up to companies who want to make sure that you'll stay with them. You'll also have to show up late to at least one of your internships which "never looks good, and then you'll have to explain to everyone where you were the first half of the summer," one MBA tells Vault. In addition "you run the risk of pissing off the companies who've offered you the internship," says one MBA student. "So, if you think you might definitely want to work for one of the companies, you should take that into account."

A quantitatively-inclined MBA student who split his summer advises: "You shouldn't split your summer if you are only 5 or 10 percent curious about what it might be like in another industry. Your minimum curiosity level should be around 25 percent." In general, says one MBA grad, "it makes more sense to split your summer if you're interested in the two industries involved, but perhaps not the firms in particular. Remember that summer internships

are normally much more difficult to get than permanent employment, so you may be able to trade up to better firms during full-time job interviews. In other words, if you split a summer interning at two places you're not interested for permanent employment, you don't have to worry about what the firms think."

Structuring a split summer

According to insiders who've done it, here are some useful strategies for structuring a split summer internship. First of all, never let on that you intend to split your summer during your interviews. Express full enthusiasm for corporate finance, or strategy consulting, or whatever you're interviewing for—you can bring up a split summer if you get a job offer. Secondly, decide which internship is your priority internship, and put that one at the beginning of your summer. That way, you'll enter with the rest of the intern class, and your leaving early will attract less notice.

Questions to Ask During Your Summer Internship Interviews

Not all internships are created equal. Some involve dedicated training, exposure to managers, and significant responsibility. Others involve grunt work and sitting around with nothing to do.

How do you make sure you're getting a good deal when you sign on for an internship? Take the time during your interview to make sure you understand what's involved in the internship by asking these questions.

- Can you give me an example of my summer responsibilities? Try to make sure the answer you receive is as specific as possible. Particularly if you're new to the industry, you want to ensure that you will perform work that is representative of a full-time associate.
- How many people are typically given permanent job offers? And ask for percentages too. This shows you're interested in opportunities after graduation at the firm, and allows you to plan your strategic options. Some firms, like Goldman Sachs, are known for giving offers to a small proportion of the summer class. You may want to try better odds at another firm.
- Will I be able to rotate between departments? Again, the more you know about the company, the better you will be able to determine which department interests you most, or whether you want to work at the firm at all. If there's a specific department you want to work in, you should make this known.
- Do you provide any assistance with relocation? Many firms will help locate, and even subsidize, summer housing. If this makes a difference in whether you take the position, ask.

Prepare for your consulting and finance interviews on Vault:

- **Vault Guides:** *Vault Guide to the Case Interview*, *Vault Case Interviews Practice Guide*, *Vault Guide to Finance Interviews*, *Vault Finance Interviews Practice Guide*, *Vault Guide to Advanced and Quantitative Finance Interviews*
- **Career Services:** One-on-One Finance Interview Prep, One-on-One Case Interview Prep
- **Vault Employee Surveys:** See what employees say about their interviews at top finance and consulting firms

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or

www.vault.com/consulting

or ask your bookstore or librarian for other Vault titles.



THE MBA JOB SEARCH

Resumes

Ten Seconds

Studies show that regardless of how long you labor over your resume, most employers will spend 10 seconds looking at it. That's it.

Because of the masses of job searchers, most managers and human resource employees receive an enormous number of resumes. Faced with a pile of paper to wade through every morning, employers look for any deficiency possible to reduce the applicant pool to a manageable number. Thus, your resume must present your information quickly, clearly, and in a way that makes your experience relevant to the position in question. That means condensing your information down to its most powerful form.

So distill, distill, distill. Long, dense paragraphs make information hard to find and require too much effort from the overworked reader. If that reader can't figure out how your experience applies to the available position, your resume is not doing its job.

Solve this problem by creating bulleted, indented, focused statements. Short, powerful lines show the reader, in a glance, exactly why they should keep reading.

Think about how to write up your experience in targeted, clear, bulleted, detail-rich prose. Here are some examples.

Before

Primary Duties: Computer repair and assembly, software troubleshooter, Internet installation and troubleshooting, games.

After

Primary Duties:

- Assembled and repaired Dell, Compaq, Gateway, and other PC computers
- Analyzed and fixed software malfunctions for Windows applications
- Installed and debugged Internet systems for businesses such as Rydell's Sports, Apple Foods, and Eric Cinemas

Before

Responsibilities included assisting with artist press releases, compiling tracking sheets based on information from reservationists and box office attendants, handling photo and press release mailings to media, assisting in radio copywriting, and performing various other duties as assigned.

After

Experience includes:

- Wrote artist press releases that contributed to an increase in sales by 23%
- Compiled and maintained mailing list of 10,000—Cambridge Theater's largest-ever list
- Handled press release mailings to *Anchorage Daily News*, and Fox Four Television
- Contributed to copywriting of promotion radio commercials for selected events

It's What You Did, Not What Your Name Tag Said

Resumes should scream ability, not claim responsibility. Employers should be visualizing you in the new position, not remembering you as “that account assistant from Chase.” While some former employers can promote your resume by their mere presence, you don’t want to be thought of as a cog from another machine. Instead, your resume should present you as an essential component of a company’s success.

Think Broadly

Applicants applying for specific job openings must customize the resume for each position. Many job-hunters, particularly those beginning their careers, apply to many different jobs.

A person interested in a career in publishing, for example, might apply for jobs as a writer, proofreader, editor, copywriter, grant proposal writer, fact-checker, or research assistant. The applicant may or may not have the experience necessary to apply for any of these jobs. But you may have more skills than you think.

When considering the skills that make you a valuable prospect, think broadly. Anyone who has worked a single day can point to several different skills, because even the most isolated, repetitive jobs offer a range of experience. Highway toll collection, for instance, is a repetitive job with limited variation, but even that career requires multiple job skills. Helping lost highway drivers read a map means “Offering customer service in a prompt, detail-oriented environment.” Making change for riders translates as “Financial transactions in a high-pressure, fast-paced setting.” But unless these toll-booth workers emphasize these skills to prospective employers, it’ll be the highway life for them.

Selected History

A lot of things happen in everyone’s day, but when someone asks, “How was your day?” you don’t start with your first cough and your lost slippers. You edit. Resumes require that same type of disciplined, succinct editing. The better you are at controlling the information you create, the stronger the resume will be.

When editing your history to fit the resume format, ask yourself, “How does this particular information contribute towards my overall attractiveness to this employer?” If something doesn’t help, drop it. Make more space to elaborate on the experiences most relevant to the job for which you are applying.

Similarly, if information lurks in your past that would harm your chances of getting the job, omit it. In resume writing, omitting is not lying. If some jobs make you overqualified for a position, eliminate those positions from your resume. If you’re overeducated, don’t mention the degree that makes you so. If you’re significantly undereducated, there’s no need to mention education at all. If the 10 jobs you’ve had in the last five years make you look like a real life Walter Mitty, reduce your resume’s references to the most relevant positions while making sure there are no gaps in the years of your employment.

Sample MBA Resume

EUGENE H. HUANG

5050 S. Lake Shore Dr., Apt. 1407
 Chicago, IL 60615
 (773) 555-1234
ehuang@uchicago.edu

EDUCATION

MIDWAY SCHOOL OF BUSINESS

Master of Business Administration – Finance and Strategic Management

Chicago, IL
 June 2004

- Dean's Honor List
- Active member of Management Consulting, Corporate Management and Strategy, and High Tech Clubs.

ANDERSEN COLLEGE

Bachelor of Arts in Physics (Cum Laude)

Boston, MA
 June 1999

- Andersen College Scholarship for academic distinction; Dean's List all semesters
- Violinist in Andersen College Symphony
- Physics tutor for Bureau of Study Counsel; active participant in Habitat for Humanity
- Completed dissertation in the field of condensed matter theory

EXPERIENCE

SMART BROTHERS

Technology Project Manager – Investment Banking

New York, NY
 June 2000 – July 2002

- Managed project teams to develop profit and loss systems for Proprietary Trading group
- Promoted to project leadership role in two years, well ahead of department average of four
- Developed an original mathematical algorithm for trading processing module, improving performance by 1200%
- Led team of six analysts in firmwide project to reengineer loan syndicate trading flows in firm's largest technology project of 1999. Recommendations established new firmwide standard for real-time trade processing
- Appointed lead developer of interest accrual team after just three months in department. Initiated and designed project to create customized, improved interest accrual and P&L applications for fixed income controllers
- Selected to work on high-profile project to reengineer corporate bond trading P&L system. Reduced overnight processing time from six hours to 20 minutes and improved desktop application speed by 350%
- Devoted 20-25 hours a month to instructing junior members of the team in interest accrual and trading

FINANCIAL TECHNOLOGY GROUP

Analyst

New York, NY
 June 1999 – May 2000

- Developed cutting-edge analytic software for use by Wall Street traders
- Worked on a daily basis with clients to create and implement customized strategic software solution for equity traders. Helped create and deliver extensive training program for clients
- Initiated, created, and documented new firmwide standard for software module development

OTHER

- Winner of Mastermaster.com stock trading competition in November 2000. Won first place out of over 1,600 entrants worldwide with one-month return of 43.3%
- Other interests include violin, soccer, and the harmonica
- Recent travel to Yemen, Egypt, and Venezuela

Cover Letters

The Cover Letter Template

Your Name
Your Street Address, Apartment #
Your City, State Zip
Your Email Address
Your Home Phone Number
Your Fax Number

WONDERING WHAT GOES ON A COVER LETTER? HERE'S A STEP-BY-STEP GUIDE

Contact's Name
Contact's Title
Contact's Department
Contact's Name
Contact's Street Address, Suite #
Company City, State Zip
Company Phone Number
Company Fax Number

Date

Dear Ms./Mr. CONTACT,

The first paragraph tells why you're contacting the person, then either mentions your connection with that person or tells where you read about the job. It also quickly states who you are. Next it wows them with your sincere, researched knowledge of their company. The goal: demonstrating that you are a worthy applicant, and enticing them to read further.

The second and optional third paragraph tell more about yourself, particularly why you're an ideal match for the job by summarizing why you're what they're looking for. You may also clarify anything unclear on your resume.

The last paragraph is your goodbye: you thank the reader for his or her time. Include that you look forward to their reply or give them a time when you'll be getting in contact by phone.

Sincerely,

Sign Here

Date

Placement of the date, whether left justified, centered or aligned to the right, is up to your discretion, but take the time to write out the entry. If you choose to list the day, list it first, followed by the month, date, and year, as follows: Tuesday, July 9, 2004. (Europeans commonly list the day before month, so writing a date only in numbers can be confusing. Does a letter written on 4/7/04 date from April 7, or July 4?)

Name and address

Your name and address on the cover letter should be the same as the one on your resume. Uniformity in this case applies not only to the address given, but the way the information is written. If you listed your street as Ave. instead of Avenue on your resume, do so on your cover letter too.

Your header can be displayed centrally, just like the resume header—including your name in a larger and/or bolded font. But in most cases, the heading is either left justified or left justified and indented to the far right hand side of the page.

If you choose to list your phone number, make sure that you don't list it somewhere else on the page.

Next comes the address of the person you are writing. In many circumstances, you'll have the complete information on the person you're trying to contact, in which case you should list it in this order:

- Name of contact
- Title of contact
- Company name
- Company address
- Phone number
- Fax number

However, in many cases, you have less than complete information to go on. This is particularly true when responding to an advertisement. If you have an address or phone or fax number but no company name, try a reverse directory, such as Superpages (www.superpages.com), which lets you trace a business by either its address or phone number.

When you're trying to get a name of a contact person, calling the company and asking the receptionist for the name of the recipient (normally, though not always, head of HR) may work. But usually, companies don't list this information because they don't want you calling at all. So if you call, be polite, be persistent, ask for a contact name, say thank you and hang up. Don't identify yourself. If you have questions, wait until the interview.

If you don't get all of the info, don't worry. There are several salutations to use to finesse the fact that you've got no idea who you're addressing. Some solutions are:

To whom it may concern: A bit frosty, but effective.

Dear Sir or Madam: Formal and fusty, but it works.

Sirs: Since the workforce is full of women, avoid this outdated greeting.

Omitting the salutation altogether: Effective, but may look too informal.

Good morning: A sensible approach that is gaining popularity.

Format

Unlike the resume, the cover letter offers the writer significant room for flexibility. Successful cover letters have come in various different forms, and sometimes cover letters that break rules achieve success by attracting attention. But most don't. Here are some basic guidelines on what information the body of a cover letter should deliver.

First paragraph

To be successful, this first paragraph should contain:

- A first line that tells the reader why you're contacting them, and how you came to know about the position. This statement should be quick, simple and catchy. Ultimately, what you're trying to create is a descriptive line by which people can categorize you. This means no transcendental speeches about "the real you" or long-winded treatises on your career and philosophy of life.
- Text indicating your respect for the firm's accomplishments, history, status, products, or leaders.
- A last line that gives a very brief synopsis of who you are and why you want the position. The best way to do this, if you don't already have a more personal connection with the person you're contacting, is to lay it out like this:

I am a (your identifying characteristic)

+

I am a (your profession)

+

I have (your years of experience or education)

+

I have worked in (your area of expertise)

+

I am interested in (what position you're looking for)

And thus a killer first paragraph is born.

Middle paragraph(s)

The middle paragraph allows you to move beyond your initial declarative sentences, and into more expansive and revealing statements about who you are and what skills you bring to the job. This is another opportunity to explicitly summarize key facts of your job history. The middle paragraph also offers you the opportunity to mention any connection or prior experience that you may have with the company.

Tell the employer in this paragraph how, based on concrete references to your previous performances, you will perform in your desired position. This does not mean making general, unqualified statements about your greatness such as "I'm going to be the best you've ever had" or my "My energetic multi-tasking will be the ultimate asset to your company."

Comments should be backed up by specific references. Try something along the lines of "My post-graduate degree in marketing, combined with my four years of retail bicycle sales would make me a strong addition to Gwinn Cycles' marketing team."

Or: "Meeting the demands of a full-time undergraduate education, a position as student government accountant, and a 20-hour-a-week internship with Davidson Management provided me with the multi-tasking experience needed to excel as a financial analyst at Whittier Finance."

Many advertisements ask you to name your salary requirements. Some avoid the problem altogether by ignoring this requirement, and this may be the safest route—any number you give might price you out of a job (before you have the chance to negotiate face-to-face at an interview). Alternatively, you might be pegged at a lower salary than you might otherwise have been offered. If you must give a salary requirement, be as general as possible. The safest bet is to offer as general a range as possible (“in the \$30,000s”). Put the salary requirement at the end of the paragraph, not in your first sentence.

Some cover letter writers use another paragraph to describe their accomplishments. This makes sense if, for example, your experience lies in two distinct areas, or you need to explain something that is not evident on your resume, such as “I decided to leave law school to pursue an exciting venture capital opportunity” or “I plan to relocate to Wisconsin shortly.” Do not get overly personal—“I dropped out of business school to care for my sick mother” is touching, but will not necessarily impress employers.

Final paragraph

The final paragraph is your fond farewell, your summation, a testament to your elegance and social grace. This should be the shortest paragraph of the letter. Here, tell your readers you’re pleased they got so far down the page. Tell them you look forward to hearing from them. Tell them how you can be reached. Here’s some sample sentences for your conclusion.

Thank you sentences:

Thank you for your time.

Thank you for reviewing my qualifications.

Thank you for your consideration.

Thank you for your review of my qualifications.

Way too much:

It would be more than an honor to meet with you.

A note of confidence in a callback:

I look forward to your reply.

I look forward to hearing from you.

I look forward to your response.

I look forward to your call.

Over the top:

Call me tomorrow, please.

MBA Summer Internship Cover Letter

February 1, 2005

Kimberly Sharpe, Recruiting Manager
Hexagonal Consulting
666 Avenue of the Americas
13th Floor
New York, NY

Dear Ms. Sharpe,

I am a first-year MBA student at State Business School. I was extremely impressed with Hexagonal Consulting's approach to management consulting after attending the presentation given by your firm earlier this year. I also learned more about your firm by talking with William Field and several other summer interns. My discussions with them confirmed my interest in Hexagonal Consulting, and I am now writing to request an invitation to interview for a summer associate consulting position.

After graduating from Northern College with a degree in accounting, I worked as an associate in the Finance department of AutoCo, a well-known automotive manufacturer. I gained solid analytical and problem solving skills there. I was responsible for identifying and resolving financial reporting issues, as well as generating innovative methods to improve our processes. I also fine-tuned my communication and consensus building skills, as I often needed to present and market my work to middle and upper management. Finally, during my last year of employment, I took on a team leadership role, managing the daily work of five junior members of our team and taking an active role in our training for new hires.

I am excited by the strong potential fit I see with Hexagonal Consulting. I feel that the analytical, leadership and teamwork abilities gained through my employment and academic experience have provided me with the tools and skills necessary to perform well in a consulting career, and will allow me to make a significant contribution at your firm. I am particularly intrigued by the shareholder value focus of Hexagonal Consulting's methodology, since it fits well with my experience in finance.

I have enclosed my resume for your review. I welcome the opportunity to meet with you when you recruit at SBS for summer internships later this month, and I would greatly appreciate being included on your invitational list.

Thank you for your time and consideration. I look forward to hearing from you.

Sincerely,

Laura Haley
314 Broadway, Apt. 15
New York, NY 10007
lbethhaley@hotmail.com

MBA Full-Time Cover Letter

Ms. Margaret Jones, Recruiting Manager
Mainstream Consulting Group
123 21st Street
Boston, Massachusetts 02145

November 19, 2004

Dear Ms. Jones:

It was a pleasure to meet you in person last week at the Mainstream Consulting invitational lunch on the Boston Business School campus. Having spoken with your colleagues at the event, I believe that Mainstream would be an exciting and challenging firm in which to build my career.

My background fits well with a position in strategy consulting. As a Midway University physics undergraduate, I developed an analytic, creative mind geared towards solving complex problems. I applied and enhanced my problem solving skills as a technology project leader at Smart Brothers Investment Bank, where I focused on making business processes faster, more effective, and more efficient. Creating these results for traders, financial analysts, and senior management taught me how to effectively partner with clients throughout the various phases of business transformation. In addition, I gained valuable team leadership experience at Smart Brothers, guiding many project teams through the successful design and implementation of cutting-edge technology strategies.

As a telecommunications strategy intern at Global Consulting Associates this summer, I confirmed that strategy consulting is indeed the right career for me. Our project team helped a major telecommunications provider formulate a wireless data services strategy. I led the industry analysis and market opportunity assessment. This experience showed me that I am an effective contributor in a consulting environment, where industry knowledge, creative problem solving skills, fact-based analysis, and client focus are rewarded.

Mainstream appeals to me over other firms because of its focus on pure strategy projects, small firm atmosphere, and accelerated career growth opportunities. Please consider me for your invitational campus interviews this fall. I am particularly interested in positions in the San Francisco and Chicago offices, and I have enclosed my resume for your review.

Thank you for your time, and I look forward to hearing from you soon.

Sincerely,

Michael A. Thomas
100 Wellany Way
Boston, MA 02111
michaelt3@bostonu.edu

MBA Interviews

MBA Interviews

Interviewing during on-campus MBA recruiting can be a harrowing process for several reasons. First, there is the sheer volume of interviewing: some students interview with a dozen or more companies within a few week period, all while maintaining a busy class schedule.

At each interview, students work to convince interviewers that they represent a good “fit” with the company. Part of being a good fit, of course, means that students have specific interest and knowledge of the companies they are interviewing with. This crucial element of interview performance requires students to research the employers as thoroughly as possible in order to convincingly make their cases to many companies, a feat made more difficult by the large number of companies many students interview with. To help students prepare for their interviews with specific companies, Vault publishes 50-page employer profiles of major MBA employers, as well as “snapshots” of thousands of other major employers online at www.vault.com.

Interviewers use a variety of techniques to test students. According to the Graduate Management Admission Council’s (GMAC) Corporate Recruiters Survey survey of more than 1,000 MBA employers, behavior-based interviews (during which candidates describe specific examples of skills such as leading a team or managing a difficult employee) are used by 79 percent of recruiters, and are the most common technique used by MBA recruiters. More than half of the recruiters surveyed (53 percent) use “case” or situational interviews in which the interviewers describe a hypothetical or real business situation and ask the job seeker to work through a course of action out loud. And more than one-third (36 percent) use question that measure position-specific knowledge (such as the ability to price a bond for a fixed income finance position).

Case interviews and technical finance interviews can be particularly stress-inducing, as students cannot as easily predict questions and prepare answers for these types of interviews as they can for behavior-based interviews. (In fact, some interviewers, most notoriously in the investment banking industry, choose to deliberately make interviews stressful in order to assess how business school students respond to stressful situations.) To help students prepare for these types of interviews, we discuss case and finance interviews in detail in the next two sections.

Case Interviews

What is a case interview?

Simply put, a case interview is the analysis of a business question. Unlike most other interview questions, it is an interactive process. Your interviewer will present you with a business problem and ask you for your opinion. Your job is to ask the interviewer logical questions that will permit you to make a detailed recommendation. The majority of case interviewers don’t have a specific answer that you, the candidate, are expected to give. What the interviewer is looking for is a thought process that is both analytical and creative (what consultants love to call “out-of-the-box” thinking). Specific knowledge of the industry covered by the case question is a bonus but not necessary. Business school students and candidates with significant business world experience receive case questions that require a deeper understanding of business models and processes.

The interview with a consulting company normally lasts about half an hour. Of this time, about five to 10 minutes is taken up with preliminary chat and behavioral questions and five minutes of you asking questions about the company. This leaves five to 15 minutes for your case interview question or questions. Make them count!

Why the case?

Your impressive resume may get you an interview with a consulting firm, but it won't get you the job. Consultants know that a resume, at its very best, is only a two-dimensional representation of a multi-faceted, dynamic person.

And because consulting firms depend on employing those multi-faceted, dynamic people, the firms rely heavily on the case interview to screen candidates. The interview process is especially pertinent in the consulting industry, since consulting professionals spend the lion's share of their business day interacting with clients and colleagues and must themselves constantly interview client employees and executives.

Consultants must have a select set of personality and leadership traits in order to be successful. The consultant's work environment is extremely turbulent. There are nonstop co-worker changes, hostile client environments, countless political machinations, and near-perpetual travel. These factors mandate that an individual be cool under pressure, be influential without being condescending, be highly analytical, have the ability to understand the smallest aspects of a problem (while simultaneously seeing the big picture), and have the ability to maintain a balance between the personal and professional.

Consultants are often staffed in small groups in far-flung areas. As a result, the individual must be able to function, and function well, without many of the traditional workplace standards: a permanent working space, the ability to return home each night, easily accessed services such as administrative assistance, faxing, and photocopying, and the camaraderie that develops among co-workers assigned to the same business unit.

All these factors necessitate a unique interview structure focused on assessing a candidate's ability to manage these particular circumstances with professionalism and excellence. The case interview has evolved as a method for evaluating these characteristics.

Types of case interviews

What case interviews are not designed to do is to explore educational, professional, or experiential qualifications. If you've reached the case interview stage, take a deep breath—the consulting firm has already weighed your background, GPA, and experience and found you worthy of a deeper skill assessment. This means that the case interview is yours to lose. Triumph over your case interviews and chances are that a slot at the firm will open for you.

Case interviews vary widely, but in general they fall into three groups: business cases, guesstimates, and brainteasers.

Case interviews

Case interviews vary somewhat in their format. The classic and most common type of case interview is the business case, in which you're presented with a business scenario and asked to analyze it and make recommendations. Most cases are presented in oral form, though some involve handouts or slides, and a few (like Monitor Company's) are entirely written. (In a written case, the interviewer will not contribute any other information besides what's on the handout.) Another variation on the case interview is the group case interview, where three to six candidates are grouped together and told to solve a case cooperatively. Consultants from the firm watch as silent observers. Though you should certainly be prepared for these variations on case interviews, you are most likely to come across the traditional, mano-a-mano case interview.

Guesstimates

Whether free-standing or as part of a case, learning how to make "back-of-the-envelope" calculations (rough, yet basically accurate) is an essential part of the case interview. As part of a guesstimate, you might be asked to estimate how many watermelons are sold in the United States each year, or what the market size for a new computer program that organizes your wardrobe might be. (For example, you might need to figure out the market size for the wardrobe software as a first step in determining how to enter the European market.) You will not be expected to get the exact number, but you should come

close—hence the guesstimate. Non-business school students and others who appear to be weak quantitatively may get stand-alone guesstimates—guesstimates given independently of a case.

Brainteasers

Brainteasers are normally logic puzzles or riddles. They may be timed. Often, brainteasers are meant to test both analytic and “out-of-the-box” thinking, as well as grace under pressure.

Skills assessed in the case interview

Following your case interview, your consulting interviewer will complete a written evaluation form. The evaluation forms often include a list of qualities, traits, and abilities and ask the interviewer to assess the candidate against the list. Following is a list of these special traits that, according to consulting insiders, interviewers will be keeping an eye out for as you work through the case interview:

Leadership skills

You'll hear this from every consulting firm out there—they want leaders. Why, you might ask, would a consulting firm need a leader? After all, many beginning consultants are consigned to independent number-crunching and research. The fact is, however, that consultants are often called upon to work independently, shape projects with very little direction, and direct others. You should demonstrate your leadership skills by taking charge of the case interview. Ask your questions confidently. Inquire whether the case interview relates to the interviewer's own experience. While your resume and previous leadership experience will probably most strongly convey your leadership ability, your demeanor in the case interview can help.

Analytical skills

The core competency of consulting is analysis—breaking down data, formulating it into a pattern that makes sense, and deriving a sensible conclusion or recommendation. You should display this skill through your efficient, on-target, and accurate questions while wrestling your case to a solution.

Presentation skills

Presenting your analysis is an essential part of consulting. Once consultants have analyzed their case engagement and decided on the proper course of action, they must present their findings and recommendations to their case team and to their clients. Interviewers will be watching you closely to see if you stumble over words, use inadvisable fillers like “um” or “like” frequently, or appear jittery under close questioning. Remember: When you're speaking, slow down and smile. If asked a question that temporarily stumps you, take a deep breath and pause. It's always better to pause than babble. Ask the interviewer to restate information if necessary.

Energy

Even the most qualified and analytical hire won't be much good if she quits at 5 p.m. during a long and arduous engagement. Interviewers look for zest and energy—firm handshake, sincere and warm smile, bright eyes. Remember that consulting firms expect you to take a long flight and show up at work the next day alert, perky, and ready to go. If you must, drink lots of coffee and use eyedrops—just be energized.

Attention to detail/organization

Consultants must be as painstaking as scientists in their attention to detail. And consultants who juggle two or more flights a week and engagements all over the world must be extremely organized. You can display this skill through a disciplined, logical approach to your case solution, and by showing up for your interview prepared. You'll want to take notes, so bring a pad of paper and a pen. Interviewers notice when candidates must ask for these materials. You must arrive on time.

Quantitative skills

Those spreadsheets you'll be working with as a management consultant need numbers to fill them. Consulting interviews will inevitably test your grasp of numbers and your ability to manipulate them. Many interviewers will assess your quantitative skills by giving you a "guesstimate," either within the case question or separately.

Flexibility

Consultants may have to arrive at the office one day and be packed off to Winnipeg for six months the next. This kind of flexibility of schedule is mirrored in tests for mental flexibility. To test your grasp of a case interview, the interviewer may suddenly introduce a new piece of information ("Okay, let's say the factories must be opened either in Canada or China") or flip the terms of the case interview ("What if this labor contract is not guaranteed, as I said earlier?") and then watch how quickly you're able to alter your thinking.

Maturity

Consultants must often work with executives and company officials decades older than they are. (This is why consultants are taught the right way to answer the question, "How old are you?") Eliminate giggling, fidgeting, and references to awesome fraternity events you may have attended, even if the interviewer seems receptive.

Intelligence, a.k.a. "mental horsepower"

Rather straightforward—consulting interviewers are looking for quickness of analysis and depth of insight. Don't be afraid to ask questions for fear of looking stupid—smart people learn by asking questions and assimilating new information. At the same time, asking your interviewer to repeat an elementary (or irrelevant) concept 20 times will not do you any favors.

What kind of case will I get?

While there's no way to tell for sure what case question you'll get, there are some things that can tip you off to the kind of case you'll receive.

If you're an undergraduate or other non-MBA student, you can probably be safely assured of getting a creative or "open-ended" question. "We don't expect our undergraduate candidates to know that much about business," confides one interviewer. "What we do expect is the ability to break down and articulate complex concepts." Undergraduates are also much more likely to get guesstimates and brainteasers than MBAs.

Are you a business school student or graduate? Then your case question will probably be less open-ended and drive toward an actual solution. Your interviewer may posit something from her own experience—knowing what course of action the consultancy actually ended up recommending. This doesn't mean you have to make the same recommendation—but you'd better be able to back up your reasoning! Alternatively, one thing case interviewers love to do is look at your resume and give you a case question that relates to your past experience. "For example," says one consultant, "if you were on the advertising staff for the school newspaper, you might be given a question about investing in advertising agencies." For this reason, advise consultants, "it makes sense to follow up on your field in The Wall Street Journal because you may be asked about recent developments in it. If you know what's going on you'll be that much more impressive." Some guesstimates, like figuring out the total worldwide revenues of Tarzan, are broad enough so that most people can make a reasonable assumption of numbers.

Sample Case

You are advising a credit card company that wants to market a prepaid phone card to its customers. Is this a good idea?

Whoa! Better find out more about this prepaid phone card first before you even begin to think about recommending it.

You: What is the role of our company? Do we simply market the card or must we create them ourselves? Are we expected to provide the telephone services?

Interviewer: This card will be co-marketed with an outside phone company. We do not need to perform telecommunications functions.

You: What are our expenses connected with the card?

Interviewer: We must pay 15 cents for every minute we sell. We also have to pay \$1.00 as a start-up cost for the card and card systems.

You: What are our marketing expenses?

Interviewer: We normally use slips of paper that are attached to the backs of our credit card payment envelopes. We sometimes also send customers a direct mailing—in a separate envelope. Or we can have telemarketers call selected customers.

You: What's the cost of each of these marketing techniques, and what is their response rate?

Interviewer: Telemarketers have a 2 percent response rate and cost \$1.00 per call. Direct mailings cost us 40 cents per mailing and have a 0.50 percent rate of response. Our payment attachments have a 0.25 percent rate of response, but only cost us 5 cents each.

You: I'm going to assume we will sell one-hour phone cards. That will cost us \$9.00 for the minutes and a dollar per card—so each card costs us \$10.

Interviewer: Okay, that sounds reasonable.

You: And what is our expected revenue on a one-hour phone card? What is the current market rate for a 60-minute phone card?

Interviewer: Assume it's 50 cents a minute.

You: So if we sell the cards for \$30, we have a \$20 profit, minus our expenditures on marketing.

Interviewer: What's our cost structure look like?

You: Okay, let's figure this out. To sell 1,000 cards through telemarketing, we would need to contact 50,000 people. That would cost us \$50,000. To use direct mail, we would have to contact 200,000 thousand people, which, at 40 cents per mailing, costs us \$80,000. Since the envelope inserts aren't very reliable, we will need to contact 800,000 people using that method. But at 5 cents each, it costs only \$20,000 to sell 1,000 cards.

We make \$20 profit on each card. But even using the cheapest promotional vehicle, at \$20 profit, we would only break even, because our profits on 1,000 cards would be \$20,000. We shouldn't market this card, unless we can further cut our marketing costs or increase the price of the card. If we could slice the cost of the envelope attachments a penny or so, or sell the card for \$35, or convince our co-marketer to reduce our costs, it might be worth selling.

Interviewer: What are some other issues you might want to consider? (Notice how the interviewer is nudging you to add to your analysis.)

You: We should also consider the competitive landscape for this business. Is the per-minute rate for calling card minutes expected to fall? If so, and our costs are held constant, we may lose money. Of course, we can learn more from marketing these cards. It could be that the people likely to buy these cards might be frequent travelers and could be targeted for other promotions

Sample Guesstimate

How many square feet of pizza are eaten in the United States each month?

Take your figure of 300 million people in America. How many people eat pizza? Let's say 200 million. Now let's say the average pizza-eating person eats pizza twice a month, and eats two slices at a time. That's four slices a month. If the average slice of pizza is perhaps six inches at the base and 10 inches long, then the slice is 30 square inches of pizza. So four pizza slices would be 120 square inches. Therefore, there are a billion square feet of pizza eaten every month. To summarize:

- There are 300 million people in America.
- Perhaps 200 million eat pizza.
- The average slice of pizza is six inches at the base and 10 inches long = 30 square inches (height x half the base).
- The average American eats four slices of pizza a month.
- Four pieces x 30 square inches = 120 square inches (one square foot is 144 inches), so let's assume one square foot per person.
- Your total: 200 million square feet a month.

Finance Interviews

An overview of finance interviews

Investment banking positions and other finance positions are some of the more stressful and demanding positions on the planet, and this is reflected in the interview. In fact, insiders say that occasionally, an interviewer will yell at an applicant to see how he or she will react. Interviews normally go three or four rounds (sometimes as many as six or more rounds), and these rounds can have up to six interviews each, especially in the later rounds. Investment banking and finance interviews are also known for being deliberately stressful (as opposed to the attendant nervousness that goes with any interview). Some firms may ask you specific and detailed questions about your grades in college or business school, even if your school policy prohibits such questions. At other firms, interview rounds may be interspersed with seemingly casual and friendly dinners. Don't let down your guard! While these dinners are a good opportunity to meet your prospective co-workers, your seemingly genial hosts are scrutinizing you as well. (Hint: Don't drink too much.)

There are generally two parts to the finance hiring process: the fit part and the technical part. In asking technical questions, the interviewer wants to judge your analytical and technical skills. If you don't know the basic concepts of finance and accounting, your interviewers will believe (rightly) that you are 1) either not interested in the position 2) not competent enough to handle the job. An important part of the interviews is what is called "fit." As you go through recruiting in finance interviews, understand that you compete with yourself. Most firms are flexible enough to hire people that are a good fit.

The fit interview

They call it the O'Hare airport test, the Atlanta airport test, or the whatever-city-you-happen-to-be-applying-in airport test. They also call it the fit interview or the behavioral interview. It means: "Could you stand to be stranded in an airport for eight hours with this person?" Although bankers may have reputations for being aggressive individuals, don't act that way in your interview.

And while your performance in the fit interview partly depends—as the airport test suggests—on how well you gel with your interviewer, it also depends on your ability to portray yourself as a good fit as an investment banker, asset manager, etc. In other words, interviewers will try to figure out what your attitude towards work is like, how interested you are in a career in the industry, and how interested you are in the job for which you are applying.

I'm a hard worker

As a general rule, you should emphasize how hard you have worked in the past, giving evidence of your ability to take on a lot of work and pain. You don't have to make things up or pretend that there's nothing you'd want more than to work 100-hour weeks. In fact, interviewers are sure to see through such blatant lying. Says one I-banking interviewer, "If somebody acted too enthusiastic about the hours, that'd be weird." If you ask investment bankers and others in finance what they dislike most about their jobs, they will most likely talk about the long hours. Be honest about this unpleasant part of the job, and convince your interviewer that you can handle it well. For example, if you were in crew and had to wake up at 5:00 a.m. every morning in the freezing cold, by all means, talk about it. And if you put yourself through school by working two jobs, mention that, too.

Got safe hands?

As with all job interviews, those for finance positions will largely be about figuring out whether you can handle the responsibility required of the position. (In many cases with finance positions, that responsibility will mean making decisions with millions or billions of dollars at stake.)

An interviewer will try and figure out if you've got safe hands and won't be dropping the ball. "This is a critical I-banking concept," says one banker about safe hands. "The idea is: 'Can I give this person this analysis to do and feel comfortable that they will execute it promptly and correctly?' The people with safe hands are the ones who advance in the company. They are not necessarily the hardest workers but they are the most competent." Make sure you bring up examples of taking responsibility.

A mind to pick things apart

The world of finance is largely about number crunching and analytical ability. While this doesn't mean you have to be a world-class mathematician, it does mean that you have to have an analytic mind if you are to succeed. Explains one insider at a numbers-heavy Wall Street firm, "You can't be any old English major. You've got to have a really logical, mathematical head." Make sure you have examples of your problem-solving and analytic strengths.

T-E-A-M! Go team!

Teamwork is the buzzword of these days not just for the investment banking industry, but for every employer. Every finance position (except, perhaps, for research) requires that an employee work closely with others—whether this be in the form of investment banking deal teams, or finance officials working with marketers at a corporation. Interviewers will ask questions to make sure that you have experience, and have excelled, in team situations. Yeah, you can break out those glory days stories about the winning touchdown pass, but lots of other situations can also help describe your teamwork ability—previous work experience, volunteer activities, etc.

Preparing for finance interviews

When you review career options, don't discount the amount of time it takes to prepare for finance interviews. First of all, you should evaluate whether you actually want to be in investment banking, commercial banking, venture capital, etc. In

short, you should know what you're getting into. Not only should you know this for your own sake (this is your future, after all), but your interviewers want to know that you understand the position and industry.

You should use the opportunity of non-evaluative settings (i.e., not an interview) to get answers to these questions. These are questions to which we strongly suggest you have answers to before interviewing. Make a point to attend recruiting presentations by firms. Your informational interviews with alumni and (for those in business school) second-years are also good ways to get answers to some of your questions.

As for written materials, you can start with general business publications like *The Wall Street Journal*, *The Economist*, *BusinessWeek*, and the *Financial Times*. From there, you can move on to trade publications that will give more industry-specific news and analysis. *American Banker*, *Institutional Investor*, *Investment Dealers' Digest* and *The Daily Deal* are some examples.

Your interaction with alumni can have direct results. The results can be good if you prepare properly before contacting them. You can also assure yourself a ding if you don't handle a meeting or phone conversation correctly.

Here are some questions about finance positions you should ask before you have your first interview:

- What is a typical day like?
- What are the hours in the industry really like? Are they 100 hours every week or every other week? Is it the same for every firm?
- How do people cope with the lifestyle issues in the industry?
- What kind of money do people make in the industry?
- What are the things I-bankers (or commercial bankers, venture capitalists, etc.) like about their jobs? What would they like to change?
- What is the future of the industry for the next few years? How will the industry change? How will the margins change? The return on equity?
- What is the career track in the industry? What skills are required at what stage?
- What is so exciting about this job?
- What is the culture of an I-banking firm as compared to a Fortune 500 company? Compared to a startup?
- What are the exit opportunities after 10 years in the industry? After two years?

Research individual firms

Once you've answered questions about the industry, you should begin to narrow your research to specific firms—both to know which firms to target, and to be knowledgeable for your interviews. Good sources for research are easily accessible publications like *The Wall Street Journal*, *BusinessWeek* and *Fortune*. If you have the resources (perhaps at a school library), you can also read through recent issues of trade publications like *Investment Dealers' Digest*.

Insiders at business school who have gone through the recruiting process suggest that you form research and interview practice teams. There is a lot of material to cover, and it is not possible to do it all by yourself. Form teams for researching industries and firms. Later, you can use the same teams to practice interviews. If you are in business school, your school will undoubtedly have such a club, or you may want to team up with other students who are looking into finance careers. Teams of four to six work quite well for this research process.

Practice your interviews

You should prepare answers to common questions given at finance interviews—whether they be fit questions, technical questions, or brainteasers. While this may be easiest for technical questions and brainteasers (after all, we can help you to nail those questions with the right answers), it is also important to prepare for fit questions even if there are no right or wrong answers. We can steer you onto the right path with these questions, but you'll need to fill in the blanks. What's the hardest

thing you've ever had to do? Can you give me an example of a time when you came up with a creative solution? You don't want to be cursing yourself after an interview, thinking about what you should have said, or examples you could have brought up.

One of the best ways to prepare answers to these questions is to use mock/practice interviews. You can practice by role-playing with your friends and classmates, or by taking advantage of interview training offered by your school. Many MBA career centers offer students the opportunity to perform mock interviews, which are normally videotaped. These practice sessions are conducted either by professional career counselors or by second-year students. The mock interviewees are given the videotape of their critique to watch at home (again and again). Students may choose what kind of interview they'd like to receive: finance, consulting, etc.

What mistakes are commonly unearthed by the videotaped interview? One business school career counselor says that he finds that "most MBAs don't have their story down. They can't elaborate why they came to business school, and why they want to work in the industry." The best candidates are able to describe their background and career history, and make a pitch about why they are interested in a firm, all in a minute or less, career counselors say. Another problem is that many students apparently "can't elaborate their strengths. They have them, but can't sell them. They are too modest." While there's no use demurring when explicating your good points, career center professionals warn that "there is also a danger of tooting your horn too much"—so make sure you're not making any claims for competency you can't back up with relevant experience.

To take full advantage of their mock interviews, career counselors say, students should take them as seriously as possible. Dress professionally "to get into the interviewing mindset." Afterwards, the interviewer will go over the session, assessing the candidate's strengths and weaknesses. It's a good idea to take notes on this feedback.

Mock interviewers also coach students on appropriate answers. "For example," explains one mock interviewer, "many candidates are asked to name their top three weaknesses. Answering with your actual weaknesses is not a good idea. So when I identify a student's weaker point—maybe they are weak on real teamwork experience—we strategize on an appropriate answer. It's better to say something like 'I wouldn't call them weaknesses, but there are three areas in which I still have room to grow,' and then choose three areas that are not deal-breakers."

Do interviewers thus end up hearing the same canned answers over and over again? "I do hear from some interviewers at certain schools—not mine!—that they do hear identical answers to certain questions," says one insider. "My advice to students is to always put answers into their own words."

Prepare questions

Finally, don't forget that finance interviewers often ask candidates whether they have any questions. Don't get caught looking like a job applicant who hasn't done research and is not curious about the opportunities. Read about the firms, read about the industries, and prepare some intelligent questions.

Sample Finance Interview Questions

What happens to each of the three primary financial statements when you change a) gross margin b) capital expenditures c) etc.

This problem tests your understanding of the interconnection between all three statements.

a) If gross margin were to say, decrease, then your income statement would first be affected. You would pay lower taxes, but if nothing else changed, you would have lower net income. This would translate to the cash flow statement on the top line. If everything else remained the same, you would have less cash. Going to the balance sheet, you would not only have less cash, but to balance that effect, you would have lower shareholder's equity.

b) If capital expenditure were to say, decrease, then first, the level of capital expenditures would decrease on the Statement of Cash Flows. This would increase the level of cash on the balance sheet, but decrease the level of property, plant and equipment, so total assets stay the same. On the income statement, the depreciation expense would be lower in subsequent years, so net income would be higher, which would increase cash and shareholder's equity in the future.

c) Just be sure you understand the interplay between the three sheets. Remember that changing one sheet has ramifications on all the other statements both today and in the future.

How do you calculate the terminal value of a company?

The value of the terminal year cash flows (usually calculated for 10 years in the future) is calculated by calculating the present value of cash flows from the terminal year (in our case, Year 10) continuing forever with the following formula:

$$\text{TY FCF} = \frac{\text{FCF}_{10} (1 + g)}{(r_d - g)}$$

Here "g" is an assumed growth rate and r_d is the discount rate. (Remember that you could also calculate the terminal value of a company by taking a multiple of terminal year cash flows, and discounting that back to the present to arrive at an answer. This alternative method might be used in some instances because it is less dependent on the assumed growth rate (g)).

If you add a risky stock into a portfolio that is already risky, how is the overall portfolio risk affected?

- a. It becomes riskier
- b. It becomes less risky
- c. Overall risk is unaffected
- d. It depends on the stock

Answer: D. It depends on the stock. In modern portfolio theory, if you add a risky stock into a portfolio that is already risky, the resulting portfolio may be more or less risky than before.

A portfolio's overall risk is determined not just by the riskiness of its individual positions, but also by how those positions are correlated with each other. For example, a portfolio with two high-tech stocks might at first glance be considered risky, but if those two stocks tends to move in opposite directions, then the riskiness of the portfolio overall could be significantly lower. So the risk effect of adding a new stock to an existing portfolio depends on how that stock correlates with the other stocks in the portfolio.

When should a company issue stock rather than debt to fund its operations?

There are several reasons for a company to issue stock rather than debt. If the company believes its stock price is inflated it can raise money (on very good terms) by issuing stock. The second is when the projects for which the money is being raised may not generate predictable cash flows in the immediate future. A simple example of this is a startup company. The owners of startups generally will issue stock rather than take on debt because their ventures will probably not generate predictable cash flows, which is needed to make regular debt payments, and also so that the risk of the venture is diffused among the company's shareholders. A third reason for a company to raise money by selling equity is if it wants to change its debt-to-equity ratio. This ratio in part determines a company's bond rating. If a company's bond rating is poor because it is struggling with large debts, they may decide to issue equity to pay down the debt.

If inflation rates in the U.S. falls relative to the inflation rate in Russia, what will happen to the exchange rate between the dollar and the ruble?

The dollar will strengthen relative to the ruble.

This section was excerpted from the *Vault Guide to Finance Interviews* and the *Vault Guide to the Case Interview*. Get the inside scoop on consulting and finance interviews:

- **Vault Guides:** *Vault Guide to the Case Interview*, *Vault Case Interviews Practice Guide*, *Vault Guide to Finance Interviews*, *Vault Finance Interviews Practice Guide*, *Vault Guide to Advanced and Quantitative Finance Interviews*
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MBA DIVERSITY

The Importance of Mentors

What makes the difference between a career that thrives and one that stalls? For many women and minorities, the narrow gap between failure and success is bridged by mentorships. Mentors are people who share their general business knowledge, as well as their knowledge of a specific company, with lucky mentees (someone who is mentored). Here is some advice on how to make these valuable relationships work for you.

Mentors can keep you with an employer

After several years at the prestigious consulting firm Booz Allen Hamilton, Cathy Mhatre had her first child. Mhatre credits her mentors at Booz Allen with keeping her at the firm. “I’ve now been at Booz Allen for six years, which is unusual for any consultant. One of the main reasons I am still here is because there were people who wanted to keep me here.” Mhatre estimates that she has “four to six” mentors at the firm, and advises, “Because women mentors are scarce in general, find enlightened men.”

Have many mentors for many reasons

Do you need help on balancing your family life and career without sacrificing your career viability? You could probably use some help from a mentor who’s done just that at your company. Your work-life balance mentor, however, may not be the same person who can help you polish your presentation skills and confidence. If you seek someone who will be your advocate at performance and promotion reviews, look for someone at least two levels above you (or with four or more years of experience at the company).

Find out if your employer assigns you a mentor—then keep looking

Increasingly, employers assign mentors to incoming associates—a practice that has been common at law firms for some time and is spreading rapidly to other industries as well. Some consulting firms have entire mentor family trees—with a “founder” mentor, his or her mentees, their mentees, and so on. Make sure to take advantage of these mentors, who have specifically volunteered to serve as resources.

At the same time, the most valuable mentors are normally the ones that evolve from everyday working relationships. If someone appears willing to share their experience and skills with you and takes an interest in your career, it is likely that they would like to mentor you in some way.

Don’t expect your mentor to share your background.

While it’s terrific to have mentors that share your ethnicity or gender, it’s no sure thing. Some of the MBAs we spoke to indicate that the old “succeed and close the door behind you” ethos is still in existence. “When I was working,” says Lanchi Venator, a NYU Stern MBA graduate, “it seemed that most successful women were not open to helping other women out. It was almost as if they were saying, ‘I made it when it was tough on me. Why should I soften for you?’”

Be careful of having only one mentor.

One-on-one mentorship has its pitfalls. Corporate historians may recall the case of Mary Cunningham and William Agee at Bendix Corp. After rising rapidly through the ranks of Bendix, Cunningham, a 1979 graduate of Harvard Business School, was accused of sleeping with her mentor. Cunningham eventually left the firm. Even when the shadow of romance doesn’t

enter a close mentorship, mentees with only one advisor run the risk of being seen as an appendage or sidekick, not a full professional. Whenever possible, seek mentorship from a wide variety of people.

Tips for mentees

It's not enough to find a good mentor—it's just as important to use them correctly. Here are a few tips to make the most of your mentor relationship.

- **Find mentors at all levels of the company.** The classic mentor is someone a few levels above you in an organization—close enough to your experience to guide you upwards in the ranks, experienced enough to have some pull. But you can also gain experience from mentors at your level and at other companies as well. Your business school professors are another invaluable set of potential mentors.
- **Don't approach someone and formally ask them to be your mentor.** This kind of artificiality is akin to handing your business card to someone and asking them to be your contact—it's too artificial to take root. If someone wants to be your mentor, they will indicate that fact through the interest they take in you.
- **Keep in touch with your mentors.** Mentorship is a relationship, and relationships are built from frequent, informal contact. This is important even when your mentor is assigned to you by your company. If you move on from a company, stay in touch with your mentor there.
- **Establish trust.** Everything you discuss with your mentor is between the two of you.
- **Have realistic expectations.** Your mentor is an advisor and advocate—not someone to do your career networking for you, or someone to cover your errors.
- **Find your own mentees.** Mentorship is a two-way street. As soon as possible, start finding people who are willing to learn from you. You never know when the mentee will become the mentor!
- **Don't pass up the opportunity to have a mentor.** Having a mentor can make a major difference in your career path and your self-confidence.

Vault Diversity Q&A: Pipasu Soni, Financial Analyst, Honeywell

Pipasu Soni is a 2003 graduate of the Johnson School of Management at Cornell University. A former engineer of Indian descent, he previously worked at Ingersoll-Rand before getting an MBA. He currently works in Minneapolis as a financial analyst with Honeywell's Automation and Control Solutions (ACS) division, an \$8 billion division encompassing seven different strategic business units including environmental controls, fire solutions, security systems and more. He took time out to talk to Vault a bit about being a minority MBA and working at Honeywell.

Vault: How did you end up in your current position? Did you go to business school knowing you wanted to do finance?

Soni: Actually, I was initially interested in going into marketing, but after the very first semester, my focus shifted to finance. Previously I worked in new product development for Ingersoll-Rand. There's always some tension between the engineering and marketing side during new product introduction, and I was interested in exploring the marketing/product management aspect, to get more of a general management perspective.

But as an engineer, I enjoyed the technical side of finance and the role it played within an organization. When it came to recruiting, I really liked the Finance Pathways Program and the fact that the finance group at Honeywell is one of the keys to implementing the strategic vision of the organization.

Vault: Did you intern at Honeywell?

Soni: No actually, I interned with a consulting firm. I wanted to find out more about the consulting field, and decided it wasn't for me. I enjoyed being part of the day-to-day operations of an organization where I could influence the performance and visibly see the product. I knew Honeywell would be a great place to leverage my past experience with Ingersoll-Rand.

Vault: What sort of program were you hired into?

Soni: I was hired into Honeywell's Finance Pathways Program. It's one of their career development programs for MBA graduates. The program consists of two 18-month assignments across different Honeywell businesses. I'm in my first rotation, which ends this December. My current assignment consists of working in the corporate finance group supporting the annual operating plan, strategic plan, corporate initiatives, and other functional areas—Six Sigma and Technology. At the end of the assignment I'll move into an operational finance role at a business unit level.

Vault: Is there a formal mentorship program with the Pathways program?

Soni: No, not "formal." Mentoring takes several forms at Honeywell. All employees are encouraged to seek out mentors as well as offer to mentor others. My particular businesses assisted me in identifying a formal mentor at the beginning of my assignment. The main focus of my mentor is to provide a contact that can give me insight and advice as I move throughout my career.

In addition, you receive mentoring through working with managers on assignments. Also, your supervisor gives you regular feedback on performance and instructs you on training you should pursue.

Vault: Are there diversity organizations for you at Honeywell?

Soni: Yes, there's an Indian and Asian Association that meets on a regular basis. These groups usually meet once a month for a networking hour or a guest speaker presentation. Honeywell also has several other minority employee groups throughout the company, like the Hispanic Network and the Black Employees Network.

Vault: Did you get the feeling during recruiting that Honeywell targets minorities and women for diversity hiring purposes?

Soni: No, I don't think Honeywell specifically targets minorities, but focuses on recruiting individuals that are the right fit with the company. Honeywell defines diversity more as individual uniqueness. I don't think it's just gender, race, and ethnic background but also things such as educational and cultural background and work experience.

With that said, Honeywell's incoming Pathways class is a diverse group similar to what you would find in a typical MBA class.

Vault: What attracted you to Honeywell?

Soni: The things that attracted me the most were the people and the job assignments. For me, having a first assignment in financial planning and analysis at the corporate level allowed me to understand the strategic vision of the organization before moving into a business unit role.

Other things unique to Honeywell included the ability to work across several functions, mandatory green-belt training and certification for all incoming MBAs, and ability to switch roles—from finance to marketing if desired. I spoke with several Cornell alumni and other Pathway program members before joining and it seems that our perspective of Honeywell is very similar.

Vault: What aspects of your MBA education do you think have proved most helpful in your experience so far at Honeywell?

Soni: In my current assignment, finance, accounting, and leadership classes have been the most helpful. The classes in accounting and finance have been invaluable in reviewing business unit results. The classes in leading, communicating and team building have been also valuable in day-to-day communication getting people to meet deadlines and goals.

You learn about metrics in business school and using metrics to drive performance, but you don't realize the significance until you actually use it. It's been a great experience, and I feel like I'm going to the next level in my ability to lead teams and drive results.

Vault Diversity Q&A: Ann Silverman, M&T Bank

A 2004 graduate of the Wharton School at the University of Pennsylvania, Ann Silverman was a project manager and exhibition developer at the Smithsonian Institution in New York prior to business school. She decided to get an MBA in order to have a greater impact on the community in which she lives and ended up choosing to join the Executive Associate program at M&T Bank in the Washington, DC metro area after graduation. She took time out to talk with Vault about her choice of regional banking and about being a woman professional in finance.

Vault: Going into business school, did you know that you wanted to go into finance and commercial banking?

Silverman: I knew that I wanted to go into finance, but I suppose coming from such a different background, I didn't know what individual buckets [in finance] there were. Once I got into business school and understood more, I knew that commercial banking in particular was what I wanted, and that I wanted a regional bank.

Vault: What in particular about regional banks and commercial banking appeals to you?

Silverman: At the Smithsonian, one of the things I loved most was the community impact of the job, but I felt that I wasn't going to have a real impact until I had a profession that hits people's wallets. When I looked at the landscape out there I thought "Wow, commercial banking is really a wonderful area that contributes to the businesses in the community and the community at large."

Vault: Why did you choose M&T?

Silverman: Looking at all of the mergers and acquisitions activity that have gone on in the banking industry, I really wanted to find a place where I would have opportunities for business development and client interaction earlier rather than later and a smaller, regional bank seemed the best place to get this experience and the chance to contribute in meaningful ways. And M&T's mission emphasizes being really involved in the community, and I take that very seriously.

Vault: Can you describe the program that you were hired into? Is it a rotational program?

Silverman: M&T has what's called the Executive Associate program. It's not really a formal rotation program; you're hired into a functional position. I was hired into commercial lending as knew I wanted to be a lender. In my case, my title is Relationship Manager. "Executive Associate" is more of a hiring title.

Vault: How long are you in the Executive Associate program?

Silverman: The first year is the more defined part of the program, though the bank does track us as Executive Associates throughout our career.

The first year has really been a mix of both project work, which gives you exposure to people throughout the bank, and learning the skills to being a lender, everything from the financial and industry analysis and the business development skills to integrating yourself into the community.

Vault: Are there training sessions for Executive Associates outside of on-the-job-training?

Silverman: In the first year, we have seminars. Almost once a month, all the MBAs are brought together at the Bank's headquarters in Buffalo. Each time, there's a lunch with one of the members of the executive committee, and bookending that in the morning and afternoon are presentations from departments throughout the Bank. This way, you get a chance to meet the other EAs that you've been hired with and the managers and staff that work across the Bank.

Vault: How many Executive Associates were there in your class?

Silverman: I believe there were 21 that were hired in my class.

Vault: Did you have any concerns about going into finance, which is notoriously male-dominated? And do you find, in comparing notes with your business school classmates, that commercial banking is any better than other areas of finance, such as investment banking or investment management?

Silverman: I would agree that finance is an area where women are underrepresented. I knew that that would be part of the world that I would enter regardless of where I went into finance. I don't feel that there's a difference between investment banking and commercial banking.

With the issue of representation of women in finance, it's only going to change as more of us come into the field. There are a lot of women who have certainly gone before me, and we need to keep that momentum. Taking my peer group at Wharton as an example, many of the women that I was friends with are going into finance, so there's continued progress.

Vault: How many women are there in your Executive Associate class at M&T?

Silverman: There were three of us. I know them quite well—we speak frequently and try to foster close relationships with each other.

One thing that was important to me about M&T is that it has a Diversity Council. It's a bank-wide initiative that's headed up by a gentleman on the senior committee of the bank. Particularly as the bank has grown in the last three years, it has made an effort to take issues of diversity seriously, as evidenced by the formation of this group. The idea that you've really got to grow and nurture that, it doesn't happen overnight.

Vault: What types of companies and organizations are you working with as a lender?

Silverman: We service middle market companies, which are companies that have revenues above \$10 million. The economy in DC is incredibly diverse. There are lots of life sciences and biotechnology companies, there are government related contractors, high technology companies. Just everything under the sun.

Vault: And how do you go about developing business with these organizations?

Silverman: One of the ways that we get a lot of business is through referrals. And one of the ways to do that is to make sure you're really well networked with accountants and lawyers in the region and others that work with businesses. People in the bank are very generous about making sure you get the external introductions you need. There are many business organizations in the county that have breakfasts, lunches, dinners, etc. Let's just say that my evenings are quite full.

Vault: Do you work with professional groups for women with respect to business development initiatives?

Silverman: Oh, yes. In the DC region, there's a group called Women in Bio, there's one called Women in Information Technology—there are a lot of those groups, and those are definitely resources I tap into.

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Credit Suisse MBA Explorer Program – 1st Year MBA Students

The MBA Explorer Program is a two-day educational outreach program that brings together students who are entering business school in the fall. In the past, the participants have been of diverse ethnic backgrounds, both male and female. In 2006, we targeted only women candidates. This unique program offers students who may not have an investment banking background a chance to learn first-hand about Wall Street and specifically Credit Suisse. Participants learn about the firm's core businesses and culture and get to meet with school teams and recruiters months in advance of the Summer Associate recruiting season.

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As our workforce continues to evolve to reflect the growing diversity of our communities, our ability to understand, value and incorporate differences becomes increasingly important. Diversity, like any other part of our long-term business plan, requires focus and resolve. Our commitment starts at the top and filters through every geographic area. A few of the things that we're doing to maintain diversity in our culture: diversity training, outreach and scholarship programs and web-based communications.

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MBA ROTATIONAL PROGRAMS

MBA Rotations

The internship after the first year of business school is a great opportunity for MBA students to experiment a bit and get a taste of a specific job or company. What if you're now in your second year and looking for your first position after business school, but still would like to try your hand at a variety of positions?

Some major employers provide rotational MBA hiring programs for new business school graduates that provide just this opportunity. MBAs who join rotational programs are hired into a specific function such as finance or marketing, but then can rotate through different specialties within the broader function (for example, treasury vs. risk management in finance). Rotations also allow for new MBA hires to gain experience with different business units at a large organization.

The following Vault Q&As will help give you a sense of how some of these rotational programs work.

Vault Q&A: Federico Sercovich, Citigroup

Upon graduating from the University of Maryland's Robert H. Smith School of Business in 2003, Federico Sercovich, joined Citigroup's rotational MBA Management Associate program with the company's North American credit card division. The program consists of two one-year rotations. Now finishing up his second rotation, he spoke with Vault about why he chose a rotational program and his experience with it.

Vault: Tell me a little bit about your pre-business school background.

Sercovich: I'm originally from Argentina. I spent four years doing marketing in Chile, in a variety of industries and functions within marketing. First I worked with the country's largest global advertising firm, BBDO, then at L'Oreal in brand management, then with B2B marketing for a smaller regional telecom.

Vault: Did you want to do a career change from marketing when you went to get your MBA?

Sercovich: Overall the idea of doing the MBA was the opportunity to expand my skill set and move on to a more general management-oriented career path.

The Management Associate program at Citigroup allowed me—in a rather “safe environment”—to gain more experience in different business functions. While marketing is still my passion, I’ve expanded my skill base to achieve my long-term aspirations.

Vault: What do you mean by a “safe environment?”

Sercovich: You know it’s a 1-year term job, and so you get to learn a lot and to add value at the same time. However it’s not something you will be doing for more than 12 months, it has a defined term, which allows you to go beyond your professional comfort zone

For example, during my current rotation which I’m finishing up this week, I’m in a CFO role supporting a new product - function clearly outside my comfort zone. I was encouraged to take the risk and I’ve seen other people doing it and succeeding at it. The program gives you the opportunity to go ahead and do these kinds of things.

Vault: So tell me a little bit about the program and the rotations that you’ve done.

Sercovich: It’s a two-year program, with two one-year rotations in different areas. My first rotation was in a marketing/strategy role in our merchant acquiring business. With that group—the customer is not the cardholder unlike the rest of the North America Cards, it’s merchants who want to take credit cards as payment instruments. During said rotation, I had the opportunity to leverage my B2B skills, and it provided me with a broad view of the payment landscape and the consumer’s behavior at the point of sale.

Vault: Did you know that you were going to that type of position when you joined the Management Associates program?

Sercovich: I was actually first a summer associate during the summer between my first and second years of business school. I was in the E-business department, working with the strategic alliances team with various partners on different cross-sell initiatives.

At the end of the summer, at the end of my performance evaluation I was offered a position in the MA Program, which I happily accepted. The way it works—you know you have a job, but you initially don't know in which business you're going to be working. When it's closer to the point of joining, you start an interview process. You meet with different managers and network. I think it's pretty cool because you are completely in charge of your career choices—you get to decide for which opportunities you want to interview.

Vault: So what about your second rotation, your current role.

Sercovich: It's a CFO role in an area called cross-sell. I provide Financial Planning & Analysis support for a new set of products under the umbrella of the alternate lending franchise. The products are unsecured personal loans.

These are new products, and this is a function I haven't been exposed to in my past. In this role, I do financial forecasting and profitability analyses, I have been solely in charge of the development of the 2006 financial plan for these products.

Vault: As a role outside of your "comfort zone" how have you found this experience?

Sercovich: Well, it's definitely stressful, but very exciting. The numbers I report roll up all the way to the CEO of Citi Cards and that's a big responsibility. The value I contribute to the business is clear and tangible.

Vault: So what are you drawing on to do your job, given that your background is in marketing?

Sercovich: It's part business school theory, part on-the-job training, and a lot of common sense. It's not rocket science—the math is fairly straightforward—but it was definitely a good challenge. I was able to put together from scratch the forecasting models for the business, which are now used every month.

Vault: Is there a formal mentorship program component to the program?

Sercovich: Last year, we joined the overall Citi Cards mentorship program, through which the MAs are paired up with a mentor who has been in the company for a while. But I think there is a huge component that is totally informal. As an MA, many doors are open, many times you can just call up a senior member of the organization and ask them for some time in their calendar. They are open to help you, and they give you wise career advice. It's sort of weird sometimes to be talking with these senior leaders who are dedicating part of their valuable time to giving career advice to a Management Associate.

Vault: So what will you be doing once you finish this rotation?

Sercovich: I have accepted a role in Citigroup International Cards, I will be working on strategic initiatives with different regions—global competitor analysis, different practices and products, taking a look at what's been successful in North America which could be rolled out elsewhere.

Vault Q&A: Rebecca Preston, Chevron

After graduating in 2001 with her MBA from the University of Michigan Business School, Rebecca Preston joined Chevron's Finance MBA Development Program, one of several MBA hiring programs maintained by the company. After stints in London and Houston in a variety of roles, Preston returned to the company's corporate headquarters in California to oversee the program. She talked to us about the program, which has been around for close to 60 years.

Vault: How many MBAs does Chevron hire a year?

Preston: For the finance program, we just increased the target this year. Historically it's been six to eight and it's now eight to 10. The HR program does about four, the marketing program hires about four, supply and trading out of Houston hires about three, global gas is considering starting an MBA program, and procurement hires in the neighborhood of four. Every group has MBA summer interns. Finance has also increased its intern target, from six to eight; the other programs do between two and four.

Vault: How long has the finance MBA program been running?

Preston: The program started in 1946. We'll be 60 years old next year. The other programs are more recent.

Vault: I'd imagine that would mean that a lot of the company's leaders have come through the program.

Preston: Yes. The former chairman came through the program. The current vice chairman is off the program, our head of international upstream (exploration and production), vice president of government and public affairs, and our CFO are all program alumni. The finance heads for major strategic business units are off the program; the comptroller, the Treasurer, they're all from the program.

Vault: Is there any crossover between the various MBA programs in terms of rotations?

Preston: Not in terms of rotations. Functionally the programs are quite different. However, we do some joint events. Typically these would be around general industry or company knowledge. For example, we bring in external instructors—last week we had a geophysics professor, Dr. Hines from University of Tulsa, lecture about topics from how the earth was formed and how oil was created through to drilling and production of resources. It's a very complex industry, so getting fluency outside of your discipline is important.

Vault: In what types of roles and locations are incoming MBA hires for the Finance program placed?

Preston: I've got eight people coming in this year. Six are starting here in California, two are overseas...

Vault: You're already sending them overseas for their first positions?

Preston: These two are returning interns. If they've had an internship at HQ and so grounding with us, we're comfortable in sending them overseas right off the bat. One's in Aberdeen [Scotland] in the North Sea, and another's in Singapore with our Treasury function. The international component is increasingly important.

Vault: How long is the program and how many rotations do employees do?

Preston: It's a two-year program. They do three or four rotations. Domestic rotations are typically six months long. Sometimes the international assignments will be longer, and someone may elect to do three rotations with a longer, more in-depth experience overseas. This is particularly true of people who have interned here. Other people might feel strongly they need to see four different areas while on the program.

We always try to maximize the diversity of experience with different business units, and different finance functions. I get contacted from Chevron businesses all over the world looking for the talent. Every month I send out an update that shows where everyone in the program is in the company, and what opportunities have come in.

We encourage people to do a rotation outside of the finance discipline, too, and we have had many people cross over in past years.

Vault: What sort of rotations would they do outside of finance?

Preston: Typically people cross over into two areas: planning and business development. The planning roles are corporate strategy roles within the business units—developing the business plan, the strategic plan for the organization, within overall corporate strategy. The business development roles might be supporting commercial teams looking for new opportunities. For example, you might be supporting a team that's negotiating for new opportunities in Russia.

Vault: With the program having been in place for so long, there must be a lot of alumni from the program.

Preston: Yes. There are about 150 alumni and we've got a very active alumni network for the program. As the program manager I maintain all that information. We have two to three events a year that pull in all the alumni. We do a "family picnic" every year. We have a summer cocktail, where people meet the interns and the new hires. This year, the CFO was there, the head of investor relations was there, and other senior people. And every year we do the holiday luncheon and that pulls in all the alumni as well. These are typically in the Bay Area.

About a quarter of the alumni are international now. There are alumni in Moscow, Kuwait, London, Singapore, Scotland, Barbados, Beijing, Bogotá, Angola, Venezuela...

Vault: Is there any resentment among other finance professionals toward what might be thought of as an elite group?

Preston: There's definitely the risk of it becoming sort of an elitist group, and if that were to happen, the program would lose much of its effectiveness. But that hasn't happened because we're highly selective in who we bring in. Our industry is enormously complex, so you have to be humble and learn from the experienced people around you. You also have to be very capable so that you can take these learnings and produce superior results in a short period of time (6 months or less for the rotations). Fit is very important—we have a highly collaborative and cooperative culture at Chevron.

Bringing in people with strong teamwork orientation, combined with demonstrated performance, means that rather than resentment, there's a lot of respect for the program and its members. They're able to perform at a high level quickly so people are clamoring for program members to work on their teams.

There's brisk, brisk demand for program graduates once their 24 months on the program is over. A big part of my job is matching the right opportunity with a program member's individual interests and development goals. It's quite common to move every 18 months to three years after you're off the program, because you're building up a broad base of experience.

Vault: Do most of the people who join the program have energy industry experience?

Preston: Not necessarily. I'd say it's less than a quarter that have direct industry experience, although a lot of them have technical backgrounds, such as engineering or geosciences. A lot of people have finance backgrounds or economics backgrounds.

Vault: But when interviewing, you're trying to make sure they are interested in the industry.

Preston: That's very important. In the first round for full-time hires, I spend almost all of the time trying to understand fit and motivation—is energy something they're passionate about? Will they thrive in our culture or clash with it? I then use the second round to push on the technical skills. Can they do the job? We're looking for every hire to be a career hire. We have 90% retention over 10 years. Fit and motivation is what's going to sustain you over the long run.

Vault: Is there a formal mentoring program?

Preston: We do not do a formal mentor matching in the Finance Program, but some of the other programs do. Instead, our alumni are very receptive to program members. I facilitate connections and our members find diverse and successful mentoring relationships that way. For interns we do match them with a "buddy," someone who's currently on the program and can help them evaluate us as a full-time employer.



INDUSTRY OVERVIEWS

Aerospace and Defense

Aerospace and Defense Industry Overview

Smart segment

The aerospace industry consists of companies which produce aircraft, missiles, satellites and propulsion systems, as well as the firms which maintain and develop these products. Aerospace and defense are closely allied, with the same companies frequently serving both civilian and military markets. The majority of civil aerospace ventures are related to the manufacture of planes for the transport of goods or passengers, while defense uses planes for combat, transport and reconnaissance. Satellite construction and maintenance also forms a growing part of this industry because of their applications in the areas of communications, entertainment, research and global positioning systems (GPS). According to the Bureau of Labor Statistics (BLS) there were some 2,800 companies doing business in aerospace and defense in 2004 (the latest year for which data was available).

We have liftoff

The aerospace industry took off (pun intended) following the Wright brothers' first successful flight in 1905. As with many new technologies, airplanes were first used extensively in a war—namely, World War I, for reconnaissance, bombing and aerial combat. Following the war, when the U.S. found itself with a surplus of military aircraft and pilots with not much to do, the postal service opted in 1918 to use them to start a transcontinental air mail service, which ran from New York to San Francisco. To keep costs down, 12 spur routes were spun off to independent contractors—thus were the familiar friendly sky-flying companies of American Airlines, United Airlines, TWA and Northwest born.

Passenger flights did not become a reality until Ford introduced a 12-seat plane, which made carrying people potentially profitable. Pan American Airways, the first airline with international destinations, was founded in 1927, with other airlines adding international routes in the 1940s. Remarkably, airlines remained generally profitable during the Great Depression. Following this period, World War II brought many advances to the civilian air transport sector. Innovations initially intended for bombers made passenger planes larger, faster, able to carry heavier payloads and to fly at higher altitudes. The 1970s saw the introduction of supersonic air travel with the advent of the Concorde—which is now defunct.

Looking up

The civil aviation sector suffered a severe economic blow following the attacks of September 11, in the form of a forced grounding of planes immediately after the attacks, as well as the rapid institution of stringent airport security measures—all of which led to a sharp decline in orders for new planes after 2001. The following year, the top 10 commercial airlines, the biggest customers for these aircraft when business is good, lost more than \$12 billion, with key players like United Airlines' parent company UAL and US Airways filing for bankruptcy. Employment in the industry hit a 50-year low in 2004. But by the end of that year, aerospace sales, orders, exports and employment had all experienced a significant uptick. The number of U.S. commercial jetliners delivered increased for the first time in two years, while civil aircraft sector revenue increased to \$35 billion. According to the Aerospace Industries Association (AIA), this favorable trend continued in 2005 with increases across all sectors of the industry—sales, for one, were up 9.2 percent. The body's 2006 predictions are similarly rosy.

Plane dealing

The bulk of the aerospace industry is taken up by firms producing civil aircraft for commercial airlines and cargo transportation, as well as those for general aviation, like leisure planes, helicopters and corporate jets. But the lucrative nature of defense contracts shouldn't be underestimated: the U.S. government is planning to spend a whopping \$439 billion on defense in 2007. Boeing, with its wealth of (sometimes controversial) defense contracts in addition to its commercial airplane business, dominates the aerospace and defense industry as a whole, closely followed, ranked according to sales, by EU firm EADS, which owns bitter Boeing rival Airbus; defense contract leader Lockheed Martin; and ship- and submarine-builder Northrop Grumman. Other major players are Raytheon, Textron, United Technologies and Embraer, while leading jet engine manufacturers include GE Aircraft Engines, Pratt & Whitney and Rolls-Royce.

De-FENSE!

In the area of companies that specialize in fulfilling defense contracts, Lockheed Martin and Northrop Grumman lead the pack, followed by Boeing, Raytheon, and BAE Systems. European companies are not far behind, though. With U.S. companies increasing spending and reeling in contracts, transatlantic rivals have no choice but to step up efforts to compete, and are slowly building up market share in America. EADS, for example, the EU's biggest defense and aerospace company, announced in 2006 that it will build UH-145 helicopters for use by the U.S. Army, Coast Guard and Department of Homeland Security. Back at home, Lockheed Martin maintains a healthy dominance in the sector thanks in part to its score of one of the richest defense deals in history, when in 2001 it beat out Boeing for a fighter jet contract worth \$200 billion. Other major players on the international end include British Aerospace and Marconi Electric Systems (BAES), which picked up U.S.-based United Defense Industries for \$4.1 billion in March 2005, and Italy's Finmeccanica. EADS has also established several partnerships recently with Northrop Grumman and Lockheed Martin.

The defense portion of the industry has been affected not only by the war on terror and mega mergers, but also by a shift in the way warfare is practiced. Since the Cold War, modi operandi among Pentagon types have shifted from "shock and awe"—never mind the start of the most recent war in Iraq—to a focus on equipment that's smarter, leaner and more mobile.

In order to keep on the bleeding edge of warfare technologies, the aerospace and defense industry spent about \$38 billion on R&D in 2005. Developments in the industry include General Atomics' unmanned Predator drones, which saw success in Afghanistan. Unmanned jets and other computer-guided equipment are seen as preferable to traditional manned craft, as they are less costly to operate and pose less risk (obviously) to military personnel in combat. Other buzz on the industry's war front concerns "network-centric warfare," an area toward which the top defense contractors have shifted resources in recent years. In this approach, computers, satellites and sensors are all integrated so that soldiers and their planes, tanks and other equipment receive a constant stream of precise, real-time information about what's happening on the front lines.

Securing the homeland

Another major shift in the defense industry since 2001 is the growth of companies focusing on domestic (a.k.a. "homeland") security. This sector includes everything from audio and video surveillance equipment to disease and bioterrorism identification and secure communications equipment. In May 2006, the Bush administration announced an open-ended \$2 billion contract for the design and implementation of devices for the Secure Border initiative, the latest version of a plan to patrol U.S. borders. Similar, previous attempts at high-tech surveillance have not been unqualified successes. Video cameras, ordered in the 1990s, were never installed or didn't work; ground sensor systems alerted agents to unauthorized intruders such as passing trains and desert animals; and a \$6.8 million unmanned aircraft crashed in 2006.

Armies for hire

The Pentagon is increasingly—and controversially—relying on manpower from private military contractors (PMCs) to bolster its missions in Iraq, Afghanistan and elsewhere. These projects can include rebuilding power and sanitation systems and other logistical support, or (more notoriously) conducting interrogations and security operations. While the military outsourced just one percent of its work, mainly for airfield maintenance, during the first Gulf War in the 1990s, contractors are, according to Brookings Institute fellow P.W. Singer, handling as much as 30 percent of the military's services today, including reconstruction, during the ongoing activities in Iraq. These contractors include well-known giants like Halliburton subsidiary KBR (formerly Kellogg, Brown & Root), which has a nearly \$4 billion contract for oil field reconstruction and maintenance in Iraq, as well as many smaller firms.

The latter are catching the eye of aerospace and defense giants like Northrop Grumman, which recently acquired the PMC Vinnell. But they are also drawing attention from Congress, the media and the public, who question oversight of these organizations and wonder if the military should be outsourcing so much of its operations to people who, in some cases, are seen as mercenaries.

Spatial relations

The first object launched into space was a German rocket in 1942—though exploration did not begin in earnest until 1957, when Russia's Sputnik became the first manmade object ever to orbit the planet. Yuri Gagarin became the first person in space in 1961, and Neil Armstrong and Buzz Aldrin walked on the moon in 1969. But since then, there has been less interest in the awesome fiscal outlays necessary for manned space missions. NASA's budget was reduced by over half between 1994 and 2006, and the *Columbia* and *Challenger* shuttle disasters did little to recommend the program to public or political favor. Most manned space flights today are for the purposes of launching and repairing satellites and performing experiments. Unmanned exploratory missions, however, have continued, with a robotic probe sent to Mars in 2004.

In the space sector, which is made up of satellite and rocket manufacturing and launch services, familiar names lead the pack, including Boeing, Northrop Grumman and Lockheed Martin, which picked up a hefty NASA contract in June 2005 (capped at \$700 million) to develop a satellite designed to collect scientific data on Jupiter and from the solar system as a whole. Major aerospace and defense companies continue to build space activities into their long-term investment plans, even though shooting for the stars won't turn cash flow positive in any time frame outside of a science fiction novel.

Closer to Earth, space pursuits have resulted in the launch of satellites for such useful purposes as GPS devices, communications, weather prediction and research, television and radio. Specialized leaders in this field include Alcatel Space, Astrium, Orbital Sciences and Arianespace, a division of EADS. Government and military demand for satellite bandwidth is expected to quadruple in the next decade—and, as such, the two groups (which can't seem to launch satellites fast enough) have been attaching their tech to civilian birds.

Space cowboys

The star players are keeping an eye on a pack of upstarts in the space race, private companies that rely on individual investors rather than federal dollars. If successful, these private liftoff firms promise to radically alter the space exploration game by stripping it of the costs, bureaucracy and \$400 hammers that often accrue around federally funded projects. One major impetus for commercial space ventures was the Ansari X Prize, a \$10 million bounty for the first privately-funded, -manned and largely reusable spaceship to reach space twice in two weeks. The prize, modeled after the Orteig Prize, which Lindberg claimed in his transatlantic flight, was won by Scaled Composites' SpaceShipOne in June 2004. To capitalize on the success of these prizes, NASA announced several Centennial Challenges, cash prizes awarded for innovations necessary to make space flight less costly and more feasible.

Later in 2004, an unmanned rocket built by a small California company was set to carry an experimental satellite into orbit for the Defense Department in a project involving no federal dollars. The Bush Administration has come out in favor of increased involvement by such private companies in missions to send people to the moon and, one day, to Mars. In addition to these types of missions, many space visionaries—some of whom formerly headed the dot-com pack back in the Internet boom days—see all sorts of opportunities up beyond the clouds, ranging from tourism to mining for oxygen and precious metals. A few brave entrepreneurs, including Virgin chief Sir Richard Branson, who in 2004 announced a space tourism company called Virgin Galactic, have made inroads into space. Branson's aim is for people to experience short, suborbital trips for around \$200,000 per ticket starting in 2008. Currently, space tourism is limited to individuals with exceedingly high net worth, who can afford the tens of millions of dollars necessary to send them beyond the mesosphere.

Fly right

Professionals who work in the aerospace product and parts manufacturing sector, the BLS reports, enjoy earnings that are substantially higher, on average, than those of their counterparts in other manufacturing sectors. Most jobs in the sector are in the areas of skilled production and management. The BLS reports that, in 2004, 62 percent of jobs in aerospace manufacturing were in large establishments employing 1,000 or more workers. In addition, aerospace employment stopped a five-year skid in 2004, as the industry added 18,900 new jobs. Employment numbers, according to the AIA, have been gently increasing since 2004. Women are still scarce in the industry, making up only 11.3 percent of U.S. aerospace engineers in 2004, despite the fact that women earning doctoral degrees in aerospace increased by 150 percent between 1994 and 2001.

Aerospace and Defense Employer Directory

Airbus

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31707 Blagnac Cedex
France
Phone: +33-5-61-93-33-33
Fax: +33-5-61-93-49-55
www.airbus.com

BAE Systems

6 Carlton Gardens
London
SW1Y 5AD, United Kingdom
Phone: +44-1252-373-232
Fax: +44-1252-383-000
www.baesystems.com

Boeing Company, The

100 N. Riverside Plaza
Chicago, IL 60606-1596
Phone: (312) 544-2000
Fax: (312) 544-2082
www.boeing.com

General Dynamics Corporation

3190 Fairview Park Dr.
Falls Church, VA 22042-4523
Phone: (703) 876-3000
Fax: (703) 876-3125
www.gendyn.com

General Electric Company

3135 Easton Tpke.
Fairfield, CT 06828-0001
Phone: (203) 373-2211
Fax: (203) 373 3131
www.ge.com

Honeywell International Inc.

101 Columbia Rd.
Morristown, NJ 07962-1219
Phone: (973) 455-2000
Fax: (973) 455-4807
www.honeywell.com

L-3 Communications Holdings

600 3rd Ave.
New York, NY 10016
Phone: (212) 697-1111
Fax: (212) 867-5249
www.L-3Com.com

Lockheed Martin

6801 Rockledge Dr.
Bethesda, MD 20817-1877
Phone: (301) 897-6000
Fax: (301) 897-6704
www.lockheedmartin.com

Northrop Grumman Corporation

1840 Century Park East
Los Angeles, CA 90067-2199
Phone: (310) 553-6262
Fax: (310) 553-2076
www.northgrum.com

Parker Hannifin Corporation

6035 Parkland Blvd.
Cleveland, OH 44124-4141
Phone: (216) 896-3000
Fax: (216) 896-4000
www.parker.com

Raytheon Company

870 Winter St.
Waltham, MA 02451-1449
Phone: (781) 522-3000
Fax: (781) 522-3001
www.raytheon.com

Rockwell Collins

400 Collins Road N.E.
Cedar Rapids, IA 52498
Phone: (319) 295-1000
Fax: (319) 295-5429
www.rockwellcollins.com

Textron Inc.

40 Westminster St.
Providence, RI 02903-2596
Phone: (401) 421-2800
Fax: (401) 421-2878
www.textron.com

United Technologies Corporation

One Financial Plaza
Hartford, CT 06103
Phone: (860) 728-7000
Fax: (860) 728-7979
www.utc.com

Agriculture

Industry Overview

Feed me

The agriculture industry's broad scope includes everyone from farmers and ranchers to scientists who devise new and better foods and the businesspeople who keep it all running. The various disciplines within the industry seek ways to more efficiently feed Earth's ever-growing population while improving profit margins for food-related businesses. Allied industries provide the infrastructure that makes this possible, including rail and road transportation, pesticides and fertilizers, and processors that transform raw products into comestibles.

Agriculture's not just food, though: rather it covers everything that is grown or raised for consumption. Cotton and wool are agricultural products, as are animal byproducts, ornamental plants, tobacco, lumber and the various fruits and grains used to produce alcohol. The industry, unsurprisingly, is massive, accounting for 1 percent of U.S. gross domestic product. Though that might not seem like a lot, 1 percent of \$12,500,000,000,000 is a hefty chunk of change.

Bread and circuses

Despite its significant contribution to the GDP, agriculture is very risky and often unprofitable. Profit margins, especially for crops such as soybeans, wheat and corn, are very low, so these plants are frequently grown on large, industrial farms, as tiny returns per acre make small-scale farming economically unfeasible. Fruits and vegetables offer higher returns on lower acreage, but the investment in plants, soil preparation and the necessary labor-intensive harvesting makes the likelihood of farmers breaking even in the first few years unlikely.

Farmers are also at the mercy of pests, plant diseases and weather, the king of all X-factors. While insecticides and pest- and disease-resistant strains of plants can mitigate these risks, they of course cannot be entirely controlled. Heat, drought, flooding, storms and other "acts of God" work havoc on yields and, in extreme circumstances, can even lead to famine. The weather doesn't even have to be especially dramatic to drive up prices: the per-bushel cost of 2006 corn has gone up 28 percent, a two-year high, due to a hot, dry spell in the Midwest in July.

Further complicating matters is the fact that commodities such as corn, soybeans, and wheat are subject to market forces. To wit: a good harvest suppresses the price of a commodity and lowers profits, while a poor one raises prices but causes shortages. This relationship between productivity and profit has plagued agribusiness for decades. Government subsidies for corn, wheat, milk, cotton and a number of other farm products also affect the equation. Designed to hedge risks and lessen farmers' financial burden, these subsidies keep agricultural commodity prices artificially low in domestic markets and around the world.

All of the issues detailed above have forced the consolidation of farms and processing firms. Today, the real players in the industry are all big companies such as Cargill, Archer Daniels Midland, Tyson, Perdue, Bunge and Pilgrim's Pride. ConAgra, at one time a major farming firm, is currently divesting its agricultural business to focus on branded and value-added packaged foods. Meanwhile, Bayer, Dow and DuPont all have a stake in biotech, fungicides and pesticides, each with its own crop sciences division. Monsanto, meanwhile, is a leader in the genetic engineering field.

It's not just for eating anymore

When you think of corn, what initially comes to mind is probably something edible: creamy corn on the cob dripping with golden butter, crisp, salty corn chips or sweet sodas. It's unlikely that you would consider postage stamps, aspirin or imitation silk as corn derivatives, but all of these goods are manufactured using corn byproducts. Archer Daniels Midland is one of the

largest agricultural processors in the world, turning oilseeds (like soybeans), corn, wheat and nuts into food products like flour, sweeteners and emulsifiers, as well as plant-derived wood preservatives, industrial starches (which become everything from wallboard to glue) and ethanol. Its competitor in the realm of corn-derived sweeteners and starches is Corn Products International. Bunge is the world's largest processor of oilseeds, turning them into such products as biofuels, livestock meal and mayonnaise, while Cargill is a highly diversified agricultural products processor, making such items as soy waxes, vitamins, pharmaceutical coatings, flavoring agents, dairy and meat products.

An enormous range of jobs is required to keep these companies humming. Grain mills and processing plants need supervisors and staff, while commodities merchants are needed to buy and sell grain, cocoa and other articles of commerce to ensure a consistent supply. Logistics experts get the stuff from where it is to where it's going; veterinarians, nutritionists and chemists synthesize new compounds for the nutrition of animals and people; and chemists come up with coloring and flavoring agents and new uses for agricultural byproducts. Along with the usual jobs in HR, sales and IT, lawyers and MBAs are needed to keep good business practices and make sure everyone plays by the rules.

Not exactly American Pastoral

You're in for a shock if "agriculture" brings to mind amber waves of grain and fruited plains. Rather, agribusiness is as tech-focused and cutting-edge as every other industry these days. Steroids, hormones and antibiotics, for example, are routinely administered to U.S. meat and dairy animals. Steroids up the rate at which meat animals transform feed into muscle, while hormones, when administered through slow-release pellets implanted in the animal's ear, cause it to gain weight and, in cows, improve milk production. Hormones are also applied to fruits and vegetables. In order to ship fruit long distances, it must be picked before it is fully ripe to withstand the trip. Once it reaches its destination, it is treated with ethylene, the chemical which, in nature, causes fruits to ripen.

Antibiotics are given to animals to cure illnesses—a frequent occurrence when stock is kept in close conditions and fed an unnatural diet. Modern poultry flocks, for instance, are so large that sick animals frequently cannot be isolated, so producers treat all the birds that may have come into contact with the infected individual by adding antibiotics to their drinking water. Feed lot-fattened, corn-fed cattle must be given antibiotics, too, lest the distress caused their digestive tracts by eating corn kill them. Antibiotics are more widely used in subtherapeutic doses, or doses not large enough to cure an infection, a practice that encourages the proliferation of antibiotic-resistant bacteria (much as with a human who takes antibiotics at the first sign of every sniffle). Without competition, resistant bacteria can spread rapidly throughout a population and subsequently be transferred to people who eat raw or undercooked meat.

Begin, this clone war has

Beyond antibiotics and hormones, recent biotech advances have become major issues in the agriculture industry. While farmers have been selecting crops for higher yield, greater disease resistance, better flavor and other desirable qualities for the last 12,000-odd years, we are now able to manipulate individual genes in order to express specific traits. Genetic engineering has produced Golden Rice, designed to accumulate vitamin A—insufficient quantities of which can cause blindness and even death in children—in the edible portion of the grain, a boon for cultures in which rice is the staple crop and a varied diet unassured.

Researchers are looking into growing oral vaccines for hepatitis B and HIV in tomatoes and potatoes, a less expensive method than traditional vaccine production, which would make large-scale vaccination of the populations of poorer countries possible. Genetic tinkering has produced plants such as Monsanto's Roundup Ready corn, canola, soybeans and cotton, and Bayer CropScience's Liberty Link corn, which are, respectively, resistant to the proprietary herbicides Roundup and Liberty. Today, nearly all soy and half of the corn grown in the U.S. is genetically modified, as is 75 percent of cotton.

Scientists are also beginning to explore these methods for use on animals, seeking to increase egg and milk production, change fat content and speed maturity. Genetically modified varieties of catfish and tilapia, designed to grow faster, are already for sale in some countries, while bulls are being cloned in order to improve the breeding stock of cattle. Pet fish implanted with genes that produce luminescent proteins have been available for purchase since 2003.

However, such tinkering has spawned a number of advocacy groups that fear unforeseen consequences. Many groups argue that direct genetic manipulation could produce harmful side effects that simple hybridization and crossbreeding would not, while others warn that herbicide residue might remain in the tissues of resistant plant varieties, or that engineered genes might cross into wild plant populations. Entire nations have gotten in on the act, too: Nigeria, Zambia and Zimbabwe have refused or plan to refuse shipments of genetically modified corn.

The organic green giant

Consumers, motivated by concerns about the above, as well as factory farming, animal cruelty and the health of the environment, are increasingly demanding organic, ethically-treated, free-range, and antibiotic- and hormone- free food products. And apparently they are willing to pay the premium price: in 2005, organic accounted for 2.5 percent of all retail foods sold, while sales of organic meats increased 55 percent and condiments and dairy increased nearly a quarter. Demand for organic milk products outstripped supply by 10 percent that year.

Many businesses are taking advantage of this surge in organic interest. The supermarket chain Whole Foods, started in 1980 and one of the more popular purveyors of organic produce, has the highest profit margin per square foot of any grocery store. At the other end of the spectrum, Wal-Mart began offering organic products in 2006. While such produce's widespread availability will certainly have tangible benefits for the environment and for customers, there are some drawbacks. Faced with price competition, retailers will inevitably demand lower prices from organic farmers, which could put them out of business. In addition, though organic produce can be sourced from foreign countries—China, for instance—regulations stipulating what organic means are certain to differ from country to country, or could even be absent altogether.

But it's not just other countries' organic farming practices (or lack thereof) that have the potential to make waves. Organic farming was the subject of a June 2005 U.S. federal court ruling that demands stricter standards for organic food—standards that many fear will slow industry growth. Consumer advocates were pleased with the ruling (which banned synthetic ingredients in products labeled organic and requires dairy farmers to feed cows 100 percent organic feed), though the organic dairy industry says the regulations will make it more expensive to convert to organic from conventional feed, and will potentially discourage farmers from becoming organic. Consumer groups reject this argument, and claim the ruling will increase the integrity of the organic label and create a steady increase in the strength of standards. (In 2006, though, a rider was attached to the agricultural appropriations bill that loosened regulations concerning the use of non-organic ingredients in products sold as organic.)

From farmhand to finance

The agriculture industry is exceptionally diverse when you consider the number of different segments it encompasses. Operations include fish hatcheries, apple orchards, flower nurseries, slaughterhouses and more. Farm workers (who account for 90 percent of industry employees) require minimal training, but inspectors must have a relevant college degree or valid experience. Managers include farm and ranch owners, as well as those who operate ripening facilities or cold storage. Agricultural graders sort products, such as fruits and eggs, and inspectors evaluate the cleanliness of processing facilities. These professionals generally require both an agriculture degree and a background in the field.

Agronomists (researchers in the many disciplines involving agriculture) start at the bachelor degree level, and many have doctorates to perform "pure" research. Commodities brokers, who manage business deals and trade in futures, have their own specialty within the industry. The Bureau of Labor Statistics (BLS) expects that growing farms and more efficient machinery

means that there will be fewer such jobs in the future. However, small-scale farming, especially of the organic variety, is expected to grow. Additional growth sectors are the agricultural science and engineering industries. Agricultural scientists devise new food-processing methods, study soil and animal management, and frequently consult for the government or food processing companies. Agricultural engineers design farm equipment for increased efficiency and reduced environmental impact. Depending on the career path they wish to pursue, these people generally have advanced degrees. The BLS reports that these industries are expected to grow by 14 percent between 2004 and 2014.

Vault Q&A: Darryl Barbee, Archer Daniels Midland

As a product manager in Archer Daniels Midland Company's (ADM) Specialty Food Ingredients division, Darryl Barbee is responsible for shepherding new products through the development process. From ADM's headquarters in Decatur, Ill., Barbee spoke with Vault about his position.

Vault: Tell me a little bit about your position at ADM.

Barbee: I primarily work on new business development, looking at the possibility of new products in my division to see what will be profitable for the Company. I'll perform market research, as well as find the current market price domestically and internationally. I take a look at competition. Also, as it is important to keep open lines of communication with our customers, I will go out on sales calls to see what ADM products are working best for them or what could be changed.

Vault: Who are these customers?

Barbee: Our division's customers are typically major baking and beverage companies. ADM products go into food, animal feed, fuel and industrial products, so as a company we have customers in all of those markets.

Vault: As a product manager, what types of positions are your main customer contacts?

Barbee: I interact with research & development, as well as purchasing. I speak with R&D to find out what their likes and dislikes are about the products. With purchasing, I discuss the price of our products.

Vault: Is there a particular product set you work on?

Barbee: Yes. They're called acidulants, which covers citric acid and lactic acid. These are additives that go into food and industrial products.

Vault: Tell me a little bit about your background. Where did you earn your MBA?

Barbee: I received my MBA from Indiana Wesleyan in Indianapolis in May 2002.

Vault: Was it a full-time or part-time program?

Barbee: It was part-time. At the time, I was working for a different company as a financial analyst. Once I earned my MBA, I joined ADM as an assistant product manager for lecithin, a release agent you can find in cooking spray and chocolates, among other things.

Vault: How did you end up transitioning from your finance background into your current position? Were you looking for a change?

Barbee: Actually, when I was in graduate school, one of my professors asked me what I was currently doing. As I told him I was in finance, he told me I was in the wrong profession, and that I needed to get in sales. When I joined ADM, that was the direction that I wanted to pursue. As a product manager, I'm not only in sales, but also using my finance background, as I'm working a lot with numbers—P&L's, etc. It was a perfect fit.

Vault: So what is the project cycle like? How long does it take to launch a new product?

Barbee: It takes about 18 months to two years to get a new product out.

Vault: And how many would you release in a year?

Barbee: I'd say about one. Products can be tweaked many different times before they are released. I would say, if you get one product out a year, you're doing a good job. There are usually about 8 to 10 products in the pipeline.

Vault: Does your involvement with a product end once the product is approved?

Barbee: No. From there a plant is built, and while the plant is being built, I interact with the plant to make sure everything is OK. I keep track of the timeline and make sure we're keeping up.

I'm also working with R&D. I'm passing along information I am gathering from the customers about the product. Our main goal is to use our resources to help meet the needs of today and tomorrow for our customers.

I get R&D, sales, marketing and regulatory affairs together. We all make sure we're on the same page. With marketing, I'll assist in developing a brand, logo and sales literature as needed. I'll also work with marketing to talk to the trade publications to let them know we're coming out with a new product.

Vault: What is the most recent product you launched?

Barbee: Calcium citrate. It's used in orange juice, and it's also used in tablets.

Vault: What sort of classes from business school do you find most helpful with what you're doing right now?

Barbee: I would probably say marketing and finance. Also, just being a leader in a group. My cost accounting skills definitely play a huge role in launching a new product. You're looking at estimating packaging costs, what type of packaging, how much do we need to start off with. You're doing this all without any preexisting data, so my MBA, maybe more than anything else, has given me the confidence to handle those challenges managing a new product as opposed to managing a product that's already on the market.

Vault: How do you find working for a large employer like ADM?

Barbee: ADM is a Fortune 50 company, so when I talk to people about working for ADM, they know I am working for a large, successful company. ADM tends to attract and hire the best people.

There are also benefits working at the headquarters of a large organization. There's a gym on-site that's free to all employees, their spouses and dependents. At that wellness center, there is also a medical facility with an on-site doctor that employees can use.

Agriculture Employer Directory

Archer Daniels Midland Company (ADM)

4666 Faries Pkwy.
Decatur, IL 62525
Phone: (217) 424-5200
Fax: (217) 424-6196
Toll Free: (800) 637-5843
www.admworld.com

Corn Products International, Inc.

5 Westbrook Corporate Center
Westchester, IL 60154
Phone: (708) 551-2600
Fax: (708) 551-2570
Toll Free: (800) 443-2746
www.cornproducts.com

Tyson Foods, Inc.

2210 W. Oaklawn Dr.
Springdale, AR 72762-6999
Phone: (479) 290-4000
Fax: (479) 290-4061
www.tysonfoodsinc.com

Bunge Limited

2 Church St.
Hamilton, HM 11, Bermuda
Phone: 914-684-2800
www.bunge.com

Perdue Farms Incorporated

31149 Old Ocean City Rd.
Salisbury, MD 21804
Phone: (410) 543-3000
Fax: (410) 543-3292
www.perdue.com

Cargill

15407 McGinty Rd. West
Wayzata, MN 55391
Phone: (952) 742-7575
Fax: (952) 742-7393
www.cargill.com

Pilgrim's Pride Corporation

4845 US Hwy. 271 North
Pittsburg, TX 75686-0093
Phone: (903) 855-1000
Fax: (903) 856-7505
www.pilgrimspride.com

ConAgra Foods, Inc.

1 ConAgra Dr.
Omaha, NE 68102-5001
Phone: (402) 595-4000
Fax: (402) 595-4707
www.conagra.com

Smithfield Foods, Inc.

200 Commerce St.
Smithfield, VA 23430
Phone: (757) 365-3000
Fax: (757) 365-3017
www.smithfieldfoods.com

Brand Management/Consumer Products

Functional Overview

What is a marketer? The allure of brand management

Marketing encompasses a wide variety of meanings and activities. Some marketing positions are very close to sales, while others set overarching marketing strategy. What marketing positions have in common is the sense of ownership over the product or service, as well as the need to understand customer needs and desires and translate those needs into some kind of marketing communication, advertising campaign or sales effort. The manager of product or service marketing is called the brand manager—he or she is the ruler of that marketing universe.

Careers within the marketing/branding arena are high-profile. The business world is now realizing that strong brands and solid marketing programs drive shareholder value, and that companies can no longer make fundamental strategy decisions without truly understanding how to market a product. Today's business challenges—the quest for company growth, industry consolidation and deregulation, economic webs, and the emergence of new channels and technologies—make marketers even more valuable.

The titles of brand manager, product manager, and to a lesser extent, marketing manager are often used to describe the same function—some companies use one title, others use another. Marketing manager tends to be used in industries other than consumer packaged goods; product manager is often used in tech industries. “Brand management” implies more complete supervision of a product. The typical brand management framework gives a brand “group” or “team”—generally comprised of several assistant brand or assistant marketing managers and one supervising brand manager—responsibility for all matters relevant to their product or products. Whether this responsibility is in fact complete depends somewhat on the size of the company relative to the number of brands it has, the location of the brand group, and most importantly, on the company's attitude toward marketing.

How important is the individual brand manager?

Consider the company to determine the level of brand manager responsibility. The first factor: the size of the company relative to its number of brands. For a company with hundreds of different brands—Nabisco, for example—brand managers, or even assistant brand managers, may have a great deal of power over a specific brand. At companies with a few core products, brand managers will focus on narrower aspects of a brand. As one assistant brand manager at Coca-Cola comments: “They’re not going to take an MBA and say, ‘Okay, you’re in charge of Sprite.’” Brand managers at such companies will instead be focused on marketing to a particular demographic or geographic group, or perhaps handling one aspect of the product’s consumption (plastic bottles, cases of aluminum cans, and so forth).

International brand managers have historically held more sway than managers in the company's home market, but keep in mind that the daily tasks of international brand managers often lean more toward questions of operations, rather than questions of strategy or marketing. (‘How much should we produce?’ or ‘How is our distribution network affecting sales?’ rather than ‘What do we want our brand identity to be?’) International brand management is sometimes split into two positions. Global brand managers are more strategic, concentrating on issues such as protecting brand equity and developing product offerings that can be rolled out into subsidiaries. Local brand managers are more tactical. Local managers focus on executing global plans that are delivered to them, and tweak them for local consumers. Also know that with the increasing trend toward globalization and the truly global presence of certain brands, companies have sought to impose more centralization and tighter controls on the marketing of those brands from country to country. In the past, individual country

managers have had more discretion and leeway to make decisions about a brand's packaging, advertising, etc. Now, companies have established tighter guidelines on what can be done with regard to a brand around the world, with the goal of protecting and enhancing the value of the brand and ensuring a consistent product and message worldwide.

Finally, consumer products companies place varying levels of importance on their brand or marketing departments. Some companies, such as the Ford Motor Company, are driven as much by financial analyses of production costs or operations considerations as by marketing. The level of emphasis on finance or operations matters at a firm will influence not only the independence and authority of marketing managers, but also potential marketing career paths. At some companies, marketing is the training ground for general management. At General Mills, marketing is considered so important that employees in other functions who show promise are plucked from their positions and put into the department.

Careers in Marketing

Taking charge of a brand involves tackling many diverse job functions—and different subspecialties. Decide where you'd like your main concentration to lie.

Brand management

In a typical brand management organizational structure, positions are developed around responsibility for a particular product rather than a specific functional expertise (i.e. you're an assistant brand manager for Cheerios). This structure enables you to be the "master of all trades," acquiring an expertise in areas such as manufacturing, sales, research and development, and communications. In brand management, the marketing function is responsible for key general management decisions such as long-term business strategy, pricing, product development direction and, in some cases, profit and loss responsibility. Brand management offers a terrific way to learn intensively about a particular product category (you could be a recognized expert on tampons!) and to manage the responsibility of running a business and influencing its performance.

The core of brand work is brand strategy. Brand managers must decide how to increase market share, which markets and demographic groups to target, and what types of advertising and special promotions to use. And at the very heart of brand strategy is identifying a product's "brand identity." Brand groups then figure out how to exploit brand strategy, or, in some cases, how to change it. PepsiCo's Mountain Dew has built the drink's popularity among youth as a high-caffeine beverage into a "brand identity" of cutting-edge bravado that has boosted market share, while the Banana Republic chain underwent a transformation from an outdoor adventure store that sold actual Army-Navy surplus to an upscale, chic clothing store. In both cases, the brands have benefited from a shift in brand identity, and consequently, a shift in their market. Brand identity is normally created and confirmed through traditional print, radio, and TV advertising. Advertising is usually produced by outside agencies, although brand insiders determine the emphasis and target of the advertising.

Some liken a brand manager to a hub at the center of a hub and spoke system, with the spokes going out to departments like finance, sales, manufacturing, R&D, etc. It is the job of the brand manager to influence the performance of those groups—over whom he or she has no direct authority—in order to optimize the performance of his or her brand or product line.

Direct marketing

Ever wonder who is responsible for making those coupons you receive in the mail? Or the Saab videotape you've received every two years since you bought your car in 1993? You can thank direct marketers. Direct marketers are masters in one-to-one marketing. Direct marketers assemble databases of individual consumers who fit within their target market, go after them with a personal approach, and manage the production process from strategy inception to out-the-door distribution.

Direct marketers have two main objectives: to stay in touch with their current consumer base and to try and generate more business by finding individuals who fit a target set of criteria but are not currently using their particular product. For instance, if you've ever checked out of the supermarket and got a coupon for Advil after buying a bottle of Tylenol, chances are a direct marketer is trying to convince you to switch brands by offering you a monetary incentive.

It's important to note that direct marketing isn't just through snail mail. It operates in multiple media such as the Web, telemarketing, and in-store promotions. Direct marketers have a powerful new tool in their arsenal—the Internet. Marketers are able to track the online habits and behavior of customers. They can then serve up customized banner advertisements that are much more likely to be relevant to them. Many consumers have agreed to receive promotional offers on certain subjects—marketers can then send them targeted e-mail messages that allow for much easier access to purchase or action (a click on a link, for example) than a conventional mail direct marketing programs.

Affiliate/property marketing

If you're working with a major brand company like Nike, Disney, Pepsi, or L'Oreal, chances are you'll do a lot of cross-promotion, or "affiliate marketing." For instance, Nike has marketing relationships with the NBA, NFL, and a variety of individual athletes and athletic teams. Disney has a strong relationship with McDonalds; cute toys from the entertainment company's latest flick are often packaged with McDonalds Happy Meals upon the release of each new movie. L'Oreal works with celebrities like Heather Locklear and sponsors events such as the annual Academy Awards.

Marketers must manage the relationship between any two entities. If Disney wants to promote the cartoon du jour with McDonalds, or Pepsi wants to make sure that all Six Flags theme parks have a Pepsi Ride, then marketers ensure both parties are getting what they need out of the deal and staying true to their own brand image.

Price marketing/sales forecasting

Pricing is largely driven by market pressure. Most people, for example, won't pay more than \$2.00 for a hamburger in a fast food restaurant. On the other hand, brand managers always have some pricing leeway that can greatly affect market share and profitability. An increase of a nickel in the price of a product sold by the millions can make huge differences in revenue—assuming the price rise doesn't cause equivalent millions less of the products to be sold. Brand managers need to figure out the optimal pricing strategy for their product, though it's not always a case of making the most money. Sometimes it makes more sense to win market share while taking lower profits. How do brand managers justify their prices? Through extensive research. Paper towels, for example, may be much more price-sensitive than a luxury item like engagement rings or foie gras.

Brand and marketing managers don't always have free reign over pricing. At some companies, such as those that sell largely through mail order, or those with complex pricing systems, pricing and promotional offers may be limited to what the operational sales system can handle. Explains one marketing manager at a long-distance phone company (an industry with notoriously tangled pricing plans): "It's very easy to offer something to the customer. It's very difficult to implement that in the computer system."

Another large part of the general management duties of brand managers is forecasting product sales. This means not only keeping track of sales trends of one's product, but anticipating responses to marketing campaigns and product launches or changes. The forecasts are used to determine production levels. Once a year, brand groups draw up budgets for their production, advertising and promotion costs, try to convince the finance folks that they absolutely need that amount, get less than they ask for, and then rework their budgets to fit the given budget. As one international brand manager at one of the world's biggest consumer goods companies puts it: "You don't determine the production and then get that budget; you get the budget, and then determine the production."

High-tech marketing

Not everyone markets applesauce for a living. Many people choose to enter the world of high-tech marketing because they want to work with products and technologies that reshape and improve the world around us. These marketers feel that they would rather change the way a person interacts with the world in a sophisticated way, rather than spend time understanding what hair color teenagers find most appealing. High tech marketers spend much of their time understanding research and development issues and working on new product launches.

Technology companies like Intel, Dell, and Microsoft have recognized the power of branding and are utilizing traditional marketing tactics more and more. Amazon's extensive marketing campaign in 1998 helped brand that company in the mind of consumers still new to e-commerce as the company to purchase books (and other products) online. Intel became perhaps the first semiconductor company readily identifiable to the public through its heavily branded "bunny people." Marketing in the high tech world will continue to grow in importance over the next decade, as technology companies become more consumer-oriented (see Microsoft's X-Box). Marketing a service or software product versus a more tangible product is a bit different. It may be a bit more challenging to understand how consumers relate to the product. Inventory and distribution issues may be tracked differently.

Market research

If you are an analytical person who enjoys numbers and analysis, and enjoys tracking consumer behavior, then market research may be the field for you. A product is much more effective when a company understands the consumer it is targeting. That's where market researchers come in. Market researchers employ a variety of different qualitative and quantitative research techniques to understand consumers. Surveys, tracking systems, focus groups, satisfaction monitors, psychographic and demographic models, and trial/repurchase estimations are all methods researchers use to understand how consumers relate to their products. Researchers who find that consumers associate lemon scents with cleanliness, for example, may suggest that cleansers could drive up sales by adding a lemon aroma.

Marketing consulting

Although most well-known consulting firms are known for their expertise in general strategy, many consulting firms now hire industry or functional experts that focus on marketing issues. These firms need people with expertise in the areas of branding, market research, continuous relationship marketing, pricing strategy, and business-to-business marketing—they tend to hire people with previous marketing experience and value consultants who have been successful marketing managers and have lived through the full range of business issues from the inside. McKinsey and Monitor are two general strategy firms that have begun to hire marketing specialists. Other boutique marketing consulting firms, such as Kurt Salmon, focus on certain product categories like beverages, healthcare, and retail. Major ad agencies are also attempting to reinvent themselves as marketing partners focused on marketing strategy beyond simple advertising.

A Day in the Life: Assistant Brand Manager

You can often spot the assistant brand manager because they are the ones running around like a chicken with its head cut off. You must learn how to balance your time and prioritize. Here's a look at how your time might be spent:

Responsibilities	% of time per day
Meetings	30%
Analysis/data tracking	30%
Writing memos	30%
Answering management queries	30%
Interfacing with other departments	30%
Actually marketing	Optional

Although this is a humorous take on the day of an ABM (talk about giving 150%), there is some truth to it. Days and weeks will go by where you feel like you've just been pushing paper and trying to stay afloat. It is very easy to get comfortable maintaining the businesses rather than creating new opportunities. Although the role of an ABM is mostly one of maintenance, if you want to be a "star," you must shape your brand, not just maintain it.

A more realistic look at a day in the life of a brand manager

8:30 a.m. Get into work. Listen to voice mails. Check e-mails. Print out calendar of today's events. Skim the Markets section of The Wall Street Journal to find out what's happening "on the street." Go to the cafeteria and grab breakfast. (Of course, you're only eating products that your company produces or has some relationship with!)

9:00 a.m. Meet with market research department to discuss specifics of your latest round of quantitative research. You are trying to understand why people are not repurchasing your product, but you don't feel that the data presented actually answers your questions. You decide that you'll need to design another round of research—but where's the money going to come from?

10:00 a.m. Budget meeting to determine how you will be spending 2nd quarter funds. Given the decision to spend more money on research, you might need to cancel an instant redeemable coupon or a local promotion in a poorly performing market.

10:30 a.m. You head to the long-awaited product development meeting. Your team has recently discussed reformulating your product to take advantage of new technology. This new technology may raise your product's performance levels, but it will cost more to manufacture and will take some advertising effort (and more money) to explain the changes to the consumer. The group must decide whether these changes are strategically and financially justified. As always, very few people agree. You decide to summarize all the costs and benefits to the project and present the issues to your brand manager at the status meeting you have scheduled for the end of the day.

12:00 pm. A fancy lunch with a *People* magazine salesperson. For months the magazine has tried to convince you that your product should be advertised in *People*. During lunch the representative explains to you how the publication can effectively reach x percent of your target audience and how it can provide you with the extended reach you need to communicate with potential new users. You leave lunch with a fancy *People* backpack and a headache. Where can I find the money to add *People* to my media plan? Let's ask the media department (Note: While lunch with ad reps happens occasionally, the days of most brand managers are packed, without the time to spend schmoozing with ad reps. More often, brand managers, who are very focused on their jobs, grab lunch at a corporate cafeteria and take it back to their desks.)

1:30 p.m. Media planning meeting. Because sales of your product have come in slightly under budget, you have been forced to give up 10 percent of your media budget. You now must meet with the media department to determine how to cut media

funds without sacrificing your goals (to reach 20 percent of your target group, and to have a continuous presence on TV). Maybe you can cut out two weeks of TV advertising in July when not many people are home anyway. But isn't that your product's peak purchase cycle? Decisions, decisions.

2:30 p.m. Time to review changes to the latest advertising campaign. Your ad agency presented a new concept about three weeks ago that needed work. You and your brand manager made comments to the storyboard (a drawing that explains a commercial) and now you are anxious to see what the agency has produced. You review the changes with the agency via conference call and promise to present the new work to your brand manager at your status meeting later in the day.

3:15 p.m. Keep the ad agency on the phone and bring in the in-house promotions department. This ad campaign will be introduced into a promotional campaign in the top 20 performing markets in the country. You want to make sure that before you get the promotions people working on a concept, they agree with the agency on the strategy going forward. The following 45 minutes is a creative brainstorming session that offers wonderful possibilities. You promise to type all ideas up and distribute them to the group later in the week.

4:00 p.m. Strategy development with sales manager. Your category manager is insisting that all brands work to gain a better presence in supermarkets. You meet with the regional sales manager to understand what types of strategies might work to get better shelf space and more consistent in-store promotions. Once you hear his ideas, you start to price options and see if this is possible within your (reduced) current budget.

5:00 p.m. Status meeting with brand manager. You present your proposal for increased research expending as well as the implications of the new product development issue. You also review the latest advertising changes and the changes to the media plan. You aggressively present your data and your opinion and discuss these with your boss. The two of you decide on next steps.

6:00 p.m. End of the day. You spend an hour checking the 23 e-mail/voice mail messages you received during the day but failed to return. You go through your "in box" to read any documents relevant to your product. You start to attack all of the work you have to do and promise that tomorrow you'll block out some time to make some progress.

This section was excerpted from the *Vault Career Guide to Marketing and Brand Management*. Get the inside scoop on brand management careers with Vault:

- **Vault Guides:** *Vault Career Guide to Marketing and Brand Management*, *Vault Guide to the Top Consumer Products Employers*
- **Vault Employee Surveys:** Vault's exclusive employee surveys for General Mills, Kraft, Colgate-Palmolive and other top brand management employers
- **Employer Research:** Company snapshots providing business descriptions and the latest news on top brand management employers
- **Career Services:** Vault Resume and Cover Letter Reviews, rated the "Top Choice" by *The Wall Street Journal* for resume makeovers

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or ask your bookstore or librarian for other Vault titles.

Brand Management/Consumer Products Employer Directory

Campbell Soup

1 Campbell Place
Box 35D
Camden, NJ 08103
Recruiting Contact Phone: 856-968-4362
careers.campbellsoupcompany.com



Campbell Soup Company is a global manufacturer and marketer of high quality soups, sauces, beverages, biscuits, confectionery and prepared food products. The company owns a portfolio of more than 20 market-leading businesses, each with more than \$100 million in sales. They include Campbell's soups worldwide, Erasco soups in Germany, Liebig soups in France, Pepperidge Farm cookies and crackers, V8 vegetable juices, V8 Splash juice beverages, Pace Mexican sauces, Prego Italian sauces, Franco-American canned pastas and gravies, Swanson broths, Homepride sauces in the United Kingdom, Arnott's biscuits in Australia, and Godiva chocolates worldwide.

At Campbell, we define diversity as the vast array of human differences and similarities, inclusive of everyone. In order to compete and succeed in a changing marketplace we must cultivate and embrace a diverse employee population that fuels our growth and enriches our global culture.

As part of our Campbell's Vision, "Together We Will Do Extraordinary Things in the Workplace and Marketplace," our commitment to building and strengthening teams has the greatest focus of our leadership. We must have diverse perspectives, talents and teams to meet this business challenge. You won't find a better place for your talent, ideas and experience than at Campbell Soup Company.

Business schools Campbell recruits from

University of Pennsylvania (Wharton School); University of Maryland (Robert H. Smith School); University of North Carolina (Kenan-Flagler School); Cornell University (Johnson School); University of Michigan (Ross School of Business); University of Virginia (The Darden School); Carnegie Mellon University (The Tepper School)

Procter & Gamble

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E-mail: careers.im@pg.com
www.pg.com/Careers



Three billion times a day, P&G brands touch the lives of people around the world. Our company has one of the strongest portfolios of trusted, quality, including Pampers®, Tide®, Ariel®, Always®, Whisper®, Pantene®, Mach3®, Bounty®, Dawn®, Pringles®, Folgers®, Charmin®, Downy®, Lenor®, Iams®, Crest®, Oral-B®, Actonel®, Duracell®, Olay®, Head & Shoulders®, Wella, Gillette®, and Braun. The P&G community consists of almost 140,000 employees working in almost 80 countries worldwide.

P&G embraces the principles of personal integrity, respect for the individual and doing what's right for the long term. We recognize our consumers, brands and employees as the pillars of our business.

Business schools Procter & Gamble recruits from

Various Schools throughout the United States.

Brand Management/Consumer Products Employer Directory

Roche Diagnostics

9115 Hague Road
 Indianapolis, Indiana 462520
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Energy/Oil and Gas

What is the Energy Sector?

The energy sector produces, converts and distributes fuels to produce heat, light and propulsion. Oil, natural gas, and coal are burned to make heat and electricity. Wind, flowing water, and sunlight are converted into electricity. Oil is refined to propel cars, planes, and industrial machines. And to achieve these things, the companies who are producing, transporting, converting and distributing these energy sources are supported by a variety of service firms, investors, equipment providers, and government regulators.

There is a great divide in the energy sector between the oil and gas “side” and the electricity “side,” each of which accounts for about half of the business jobs across the sector. “Oil and gas” refers to the exploration for and extraction and processing of oil and natural gas. In contrast, the electric power business revolves around converting fuel to electricity in power plants and distributing that electricity to consumers. The economics of the two fields, and the regulations that govern them, are quite distinct. Generally, people make their energy careers in one camp or the other, without too much crossover. Natural gas is one arena that bridges the oil & gas versus electricity divide—it is extracted from the earth together with oil, and is also a primary fuel for generating electricity.

When people refer to the “energy sector,” they can actually mean any of the following: electric power, oil & gas, or both together. This guide takes a broad view of the industry, covering upstream (exploration), midstream (refining) and downstream (distribution and sales) oil and gas activities, electric power generation and transmission, equipment manufacturing, regulatory oversight, and lending to, investing in, and advising companies involved in the sector.

Just how big is the industry that comprises all those diverse activities? Companies in the energy sector take in nearly \$1 trillion in revenue annually, out of the \$17 trillion earned by all U.S. businesses. Energy-related businesses employ about 2.5 million people, or 2% of the U.S. workforce—far more than banking, high tech or telecommunications. Energy companies as a whole employ a high percentage of production workers (the people who drive local utility repair trucks, laborers on oil rigs, and gas station attendants), compared to other industries; of the 2.5 million energy jobs in the U.S., about 90% of them are blue-collar jobs or technical positions. The subject of this guidebook is the one-quarter-million energy-related business jobs out there: the business analysts, finance associates, marketing managers, economic modelers, and operations consultants, to name a few roles.

Energy sector positions capture about 2% of new MBA graduates, an amount roughly proportional to the industry’s size. In contrast, the investment banking and investment management sectors together capture 40% of graduates, and consulting absorbs another 20%. Even the significantly smaller high tech industry takes on 3 times the number of new MBAs as does the energy sector. What this means for you as a job seeker is that the energy sector is not as dominated by people with graduate business degrees as some other popular arenas. There is plenty of opportunity for smart, well-trained college graduates to rise through the ranks without going back to school.

Sector	US employees in managerial, business or financial positions
Pharmaceuticals and biotechnology	50,000
Telecommunications	140,000
High technology	200,000
Banking and investment management	250,000
Energy	250,000
Consulting	500,000
Entire economy	11,500,000

Which Job Function?

In order to pursue a job in the energy sector, your first decision is what type of position you want—in other words, what functional role you want to play. Your function has a lot more impact on the nature of your job than does the type of company in which you work.

You can have a wide variety of business jobs in the energy sector:

- Asset development
- Corporate finance
- Quantitative analytics, risk management
- Trading, energy marketing
- Investment analysis
- Consulting
- Business development
- Banking
- Strategy and planning
- Economics and policy analysis

Different companies can have widely varying names by which they refer to these roles. For example, “marketing” in one company involves advertising and product promotion, whereas “marketing” in another can mean commodities trading. Similarly, “business development” can be more akin to sales in one company, or synonymous with strategic planning in another.

What Type of Company?

Job functions and company types intersect in numerous ways—for example, you can do corporate finance in a large oil company or with a small fuel cell manufacturer, or choose between asset development and trading within a given utility. Below, we have summarized the characteristics of each of the major energy sector employer types:

Oil companies

Oil companies engage in exploration and production of oil (“upstream” activities), oil transportation and refining (“midstream”), and petroleum product wholesale and retail distribution (“downstream”). The largest companies, known as the “majors,” are vertically integrated, with business operations along the entire spectrum from exploration to gas stations. Smaller oil companies, known as “independents,” are often exclusively involved in exploration and production. Upstream is considered the glamorous place to be, where all the big decisions are made. Upstream jobs also involve heavy international work, with many employees sent off to new postings around the world every 3 years or so. We should also note that E&P businesses are fairly similar in nature among oil companies and companies mining other natural resources like uranium or coal—moving among these types of firms during a career can be a logical path.

The majors are known for excellent rotational training programs, and a fair number of people take advantage of those programs and then jump over to independents for good salaries. Oil companies pay well in general, but jobs are not necessarily as stable as one might think. When oil prices drop, company operating profits are dramatically impacted, and layoffs are fairly common. American oil jobs are overwhelmingly concentrated in Houston. International hot spots include London, Calgary, and the Middle East.

Some oil companies focus exclusively on midstream and downstream activities. They operate refineries to distill crude oil into its many commercially useful petroleum derivatives, like gasoline, jet fuel, solvents, and asphalt. Refineries are, in theory, built to last 40 years, but some have been around for as long as 80 years. That means that new refineries are rarely built, and the refinery business is mostly about managing the razor-thin margins between purchased crude oil inputs and revenues from refined product outputs.

Oil services companies

Oil services companies provide a very wide range of outsourced operational support to oil companies, such as owning and renting out oil rigs, conducting seismic testing, and transporting equipment. The fortunes of these companies follow the price of oil: when oil is expensive, oil companies drill a lot and make a lot of money, so business volume and revenue increase for their oil services contractors. Working for an oil services company probably means working in Texas or internationally, and can feel very much like working for an oil company, given the similarity in issues and activities.

Pipeline operators

Pipeline operators own and manage tens of thousands of miles of petroleum products and natural gas pipelines. Many of them also operate oil intake terminals, engage in commodities trading and energy marketing, and own natural gas storage facilities or petroleum refineries as well. Unlike the major oil companies, pipeline operation companies are not household names—nonetheless, the largest ones take in several billion in annual revenue, comparable to the scale of a medium-sized oil company.

Utilities

Utilities are, by definition, located all over the country..everyone has to get their electricity and gas from somewhere, of course. However, as a result of massive consolidation among utility holding companies, the corporate offices for your local utility may not necessarily be that local. There are presently about 50 investor-owned utilities in the country, but industry insiders predict that in a few years mergers may leave us with as few as 10. The “graying” of the utility industry is a well-documented trend; 60% of current utility employees are expected to retire by 2015—meaning there’s lots of opportunity today for young job seekers.

“Utility” is actually a loose term that we use to succinctly refer to gas utilities and all types of power generation companies: investor-owned utilities, government-owned utilities, municipal power companies, rural electric co-ops, and independent power producers (IPPs) or non-utility generators (NUGs). Utilities differ greatly in terms of their lines of business: some have sold off most of their generation assets and are primarily distribution companies with power lines as their primary assets; others may own large amounts of regulated power plants, and may also own non-utility generators or individual independent power plants. As the electricity market fell apart starting in 2001, most IPPs sold off their assets piecemeal to large utility holding companies or financial institutions.

Transmission grid operators

Transmission grid operators, known as Independent System Operators (ISO) or Regional Transmission Operators (RTO), provide a power generation dispatch function to a regional electricity market. They don’t own the transmission lines, but coordinate how much power is generated when and where, such that supply and demand are equal at every moment. This is an extremely complex process, and necessitates the analytical skills of electrical engineers and other generally quantitative and analytical operations staff.

Equipment manufacturers

Equipment manufacturers make turbines, boilers, compressors, pollution control devices, well drilling and pipeline construction equipment, software control systems, pumps, and industrial batteries. Many of them also provide engineering services and construction/installation of their equipment. The major gas turbine manufacturers, for example, also offer engineering, procurement and construction of entire power plants. Oil-related equipment makers are often characterized as “oil services” firms (above). The equipment manufacturers in the energy industry are not particularly concentrated in one geographic area, though of course many of the oil business-oriented ones have major offices in Texas.

Investment funds

Investment funds are a diverse bunch: mutual funds, private equity funds, and hedge funds. As a whole, the investment fund world is fairly concentrated in Boston, New York and San Francisco, but there are small funds dotted all over the country as well.

Mutual funds hire stock analysts primarily out of MBA programs to track, value, and recommend stocks in a particular sector (e.g. energy, natural resources, consumer products) to the fund managers. However, there are a lot of other finance-related positions inside these massive firms where undergrads are sought after as well.

The number of hedge funds in the U.S. has been growing at a phenomenal rate in the past few years, but they are still notoriously difficult places to get jobs. Hedge funds often hire people out of investment banking analyst programs. They tend to not hire people out of the mutual fund world, given that their valuation approach is so different, their investing horizon is so much shorter, and their orientation many times is towards short-selling as well as buying stocks. While some hedge funds may focus exclusively on energy, most are generalist and opportunistic with respect to their target sectors.

Private equity funds invest money in private (i.e. not publicly traded) companies, often also obtaining operating influence through a seat on the portfolio company’s board of directors. As a result, an analyst’s work at a private equity fund is vastly different from that at a mutual fund or hedge fund. You are not following the stock market or incorporating market perception issues into your valuations and recommendations; instead, you are taking a hard look at specific operating issues, identifying concrete areas where the portfolio company can lower costs or enhance revenue. A few private equity firms specialize in energy investing, and many more do occasional deals in the energy space as part of a broader technology or manufacturing focus. Private equity firms hire just a few people straight out of college or MBA programs, and many others from the ranks of investment banking alumni.

Banks

Banks are primarily involved in lending money to companies, but they also have their own trading operations, private wealth management, and investment analysis groups. Commercial and investment banks arrange for loans to energy companies, as well as syndicate loans (i.e. find other people to lend the money) for them. Investment banks manage IPOs and mergers and acquisitions (M&A) activities as well. The banking world is overwhelmingly centered in New York (and London), with some smaller branches in Chicago and San Francisco.

Consulting firms

Consulting firms offer rich opportunities for those interested in the energy industry. Consulting on business issues (rather than information technology or technical, scientific issues) is done at three types of firms: management consultancies, risk consulting groups, and economic consulting shops. Consulting firms are often interested in hiring people with good functional skills rather than requiring specific industry expertise, and provide a broad exposure to energy sector business

issues, as well as good training. Business consulting firm offices are located in most major cities, but much of the energy sector staff may be located in Houston, Washington D.C., and New York.

Nonprofit groups

Nonprofit groups are tax-exempt corporations (pursuant to IRS code 501(c)3) engaged in issue advocacy or public interest research. Advocacy groups may focus on developing grassroots support for public policy changes, publicizing public interest issues or problems through direct actions, or working to influence politicians to enact or change legislation. Most of the energy-related advocacy groups focus on environmental topics, though some also cover corporate financial responsibility and investor protection issues. Think tanks are public policy research institutes, staffed mainly by PhDs who generate research and opinion papers to inform the public, policy-makers and media on current issues. Interestingly, the think tank is primarily a U.S. phenomenon, although the concept is slowly catching on in other countries. Some think tanks are independent and nonpartisan, whereas some take on an explicit advocacy role. Nonprofits are funded by individual donations and grants from foundations, and accordingly a substantial portion of their staffs are dedicated to fundraising. Most energy nonprofits are based in Washington, D.C., where they have access to the federal political process, but many of them have small regional offices or grassroots workers spread out across the country.

Government agencies

Government agencies at the federal and state levels regulate the energy markets and define public energy and environmental policy. Federal agencies are mostly located in Washington D.C., and each state has staff in the state capital. Jobs can include policy analysis, research project management, or management of subcontractors. The energy agencies tend to hire people with environmental or engineering backgrounds, and are lately following a policy of hiring people with general business and management education and experience.

Energy services firms

Energy services firms help companies (in any sector) reduce their energy costs. Working for an energy services firm is similar in many respects to consulting-except that you go much further down the path of implementation. Typically, an energy services firm first conducts an energy audit to understand where a company spends money on energy: electricity, heat, and industrial processes. Then, the firm actually implements energy-saving measures “inside the fence” of the client company. This can involve investments and activities such as putting lightbulbs on motion sensors, upgrading the HVAC (heating, ventilation, air conditioning) system, negotiating better rates with the utility suppliers, or developing a cogeneration power plant adjacent to the factory. Often, the energy services firm receives payment for these services in the form of a share in the net energy cost savings to the client. These firms are located across the country, with a few of the largest clustered in Boston.

Job Function	Possible Employer Types
Asset Development	Utility; Oil Company; Pipeline Operator; Energy Services Firm
Corporate Finance	Utility; Pipeline Operator; Oil Company; Equipment Manufacturer
Quantitative Analytics, Risk Management	Utility; Oil Company; Transmission Grid Operator; Pipeline Operator; Investment Fund; Bank
Trading, Energy Marketing	Utility; Oil Company; Pipeline Operator; Investment Fund; Bank
Investment Analysis	Investment Fund; Bank
Consulting	Consulting Firm; Oil Services Company
Business Development	Equipment Manufacturer; Utility; Oil Services Company; Pipeline Operator; Energy Services Firm
Banking	Bank
Strategy and Planning	Utility; Oil Company; Pipeline Operator; Oil Services Company; Equipment Manufacturer
Economic and Policy Analysis	Government Agency; Nonprofit Group; Consulting Firm

Who Gets Hired?

As in other technology-intensive sectors, the energy sector is populated by a disproportionate number of people with technical degrees, i.e. BS, MS, or PhD in engineering, hard sciences, and math. Whether it's true or not, traditional energy company employers often feel that success in a job correlates to having a certain degree. This pickiness about your undergraduate major or master's degree field gets even stronger during economic downturns, when companies act more conservatively and have more bargaining power in terms of new hires.

In many energy jobs, the prevalence of people with technical pedigrees is somewhat a function of self-selection: individuals interested enough in the energy sector to make it their career were usually also interested enough in related topics to focus on them academically. On top of that, the prevalence of technical people is also self-reinforcing; in other words, engineers like to hire other engineers. There is also arguably an element of reality underpinning the preference for people with certain academic backgrounds—engineers communicate best with other engineers, and have proven in school that they can learn the ins and outs of a complex subject area.

This tendency is most characteristic of hiring preferences among oil companies, oil services firms, refineries, pipelines, grid operators, equipment manufacturers, energy services companies, and utilities. These firms want to hire people who have their heads around how their technologies work—people who can master the jargon quickly, and who can fit into their culture. Even for their MBA hires, these companies often look for technical undergraduate degrees or pre-MBA work in energy or another technical field.

However, there are certainly many people with liberal arts backgrounds doing great work at these types of companies. A non-technical degree does not in any way shut you out of any energy sector career path; it simply makes you slightly more unusual in the eyes of some interviewers. If you can craft a compelling story about why you are passionate about and deeply

understand the energy world, your degree becomes far less relevant. In addition, if you are applying for a finance, economics or accounting job with a degree in those fields, you are also less subject to scrutiny about your knowledge of geology, electrical engineering, or chemistry. Once you have a couple years of experience in the industry, that serves as a degree equivalent and you will have established your credibility.

Many of the service jobs in energy are interested in simply hiring smart people who demonstrate an ability to learn a new industry quickly. Energy consulting, banking, and investing jobs often screen for nothing different than their counterparts in other industries. Similarly, the newer, alternative energy companies are often heavily filled with people who studied liberal arts, economics, and government in college. These companies are progressive in terms of their business strategies, and usually this comes across in their approach to hiring as well. In addition, nonprofits typically first look for passion and commitment to advocacy work before they look for technical background.

Apart from academic background, traditional energy employers are also keenly interested in people who have a strong connection to the geographic region in which the company is located. These companies like to hire for the long term, so will often grill out-of-state candidates about why they would want to move to, for example, Houston or Atlanta. This can mean that, for a Houston oil company position, an MBA from Rice is a more attractive candidate than one from Wharton.

In fact, the energy sector offers particularly rich opportunities for students from second-tier undergraduate and graduate schools. Energy companies know that their industry is not typically considered as hot and glamorous as some other industries, and they can therefore often be skeptical about recruiting from name-brand undergraduate and graduate schools. The bottom line is that energy, as an industry, is simply less hung up on name-brand schools than some other industries, i.e. consulting, law and banking.

Moreover, during the past few years of our sluggish economy, many traditional energy companies tightened their recruiting budgets and reduced focus on first-tier schools—at the same time as service companies like consulting and banking firms reacted to a slow economy by canceling recruiting at second-tier schools and concentrating on only a limited set of top schools. Of course, those in the know are well aware that the energy sector is one of the most intellectually challenging, influential arenas in which to work! If you want to work in the sector, you can certainly seek out the energy employers, regardless of whether they visit your campus or target people from your alma mater.

In general, the best time to jump into the energy sector is right out of undergraduate or graduate (MA/MS, MBA or PhD) school. Like most employers, energy companies expect less in the way of industry experience from people who have just graduated, so it's a good time to get your foot in the door of a new field. Lateral hires of people a few years out of college or post-MBA are relatively rare, unless you have some specific industry background or functional experience a company needs. For example, a pipeline company might realistically hire someone with a couple years of general banking experience into a corporate finance role, but would be very unlikely to hire someone with a couple years of, say, real estate experience into that same role—so if you had just graduated and never spent those couple of years in real estate, you'd have a better shot at the job.

This reluctance to hire laterally from other industries is far less common in the services sector (consulting, banking, investing, nonprofits). These employers are more interested in functional knowledge and pure brainpower, rather than a track record in one particular industry or another (though they have their own intransigence about hiring people laterally from other functional areas, i.e. it's awfully hard to get into consulting or banking if you don't do so your first year out of school). As a result, these jobs are an excellent way to get into the energy sector, and offer lots of options down the road—in other words, for example, it's relatively easy to go from an energy consulting role into a corporate job at other energy firms.

One caveat for those who move from one firm to another to position themselves for a future job: traditional energy employers like stability. If you have a lot of different jobs on your resume, you should make sure to have a good story to explain the necessity of your job-hopping, and why you are long-term play for the company (whether you truly are or not). This is true when interviewing with any firm, but large, traditional energy firms are certainly more sensitive to the issue.

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Alliant Energy Corporation

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www.alliantenergy.com

American Electric Power Company, Inc.

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www.aep.com

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The Woodlands, TX 77380
Phone: (832) 636-1000
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www.anadarko.com

Aquila, Inc.

20 W. 9th Street
Kansas City, MO 64105
Phone: (816) 421-6600
Fax: (816) 467-3591
www.aquila.com

Atmos Energy Corporation

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Suite 1800
Dallas, TX 75240
Phone: (972) 934-9227
Fax: (972) 855-3040
www.atmosenergy.com

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Houston, TX 77027
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www.bakerhughes.com

BP p.l.c.

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Fax: +44-1925-822-711
www.bnfl.com

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Fax: (713) 207-3169
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Edison International

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GE Energy

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Atlanta, GA 30339
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Fax: (678) 844-6690
www.ge.com/energy

ConocoPhillips Company

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Fax: (713) 420-4417
www.elpaso.com

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www.crowncentral.com

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Fax: (415) 267-7268
www.pge.com

PNM Resources, Inc.

Alvarado Square
Albuquerque, NM 87158
Phone: (505) 241-2700
Fax: (505) 241-2367
www.pnmresources.com

PPL Corporation

2 N. 9th Street
Allentown, PA 18101
Phone: (610) 774-5151
Fax: (610) 774-4198
www.pplweb.com

Public Service Enterprise Group Incorporated

80 Park Plaza, Suite 3
Newark, NJ 07102
Phone: (973) 430-7000
Fax: (973) 824-7056
www.pseg.com

The REC Group

REC ASA
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N-1323 Høvik
Norway
Phone: +47 67 81 52 50
www.asimi.com

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www.reliant.com

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300 Schlumberger Drive
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www.slb.com

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Fax: +44-141-248-8300
www.scottishpower.plc.uk

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San Diego, CA 92101
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Fax: (619) 696-2374
www.sempra.com

Shell Oil Company

1 Shell Plaza
910 Louisiana Street
Houston, TX 77002
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Fax: (713) 241-4044
www.shellus.com

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Fax: (404) 0455
www.southernco.com

Southwest Gas Corporation

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Star Gas Partners, L.P.

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Stamford, CT 06902
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www.star-gas.com

Sunoco, Inc.

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Phone: (215) 977-3000
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www.sunocoinc.com

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www.txucorp.com

USEC Inc.

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Fax: (301) 564-3201
www.usec.com

Valero Energy Corporation

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Fashion

Fashion and the MBA

Like the entertainment industry, the fashion industry considers education to be less important than experience. So, if you want to go into the industry but don't have the previous experience, get a part-time job in sales or merchandising for an introduction to the industry. Unfortunately, most companies won't care much about your MBA unless it's a large corporation, such as Gap, Levi Strauss, Eddie Bauer, Limited or Nike. These companies tend to hire for finance, supply chain issues or CRM. Typically, you need a consulting, finance or marketing background to get a post-MBA job in the industry. Very few apparel companies have established programs to specifically hire MBAs. A few companies that do hire MBAs for the more creative positions include Cartier, LVMH, Federated and the Gap.

Hillary Shor recruits for the Strategy & Business Development and Consulting and Assurance Services groups of Gap, Inc. These groups are relatively small (about 20 to 30 people per group). Almost all candidates have an MBA, although many are not hired directly as MBA graduates. Hillary says, "We actually look at what a candidate did prior to business school. The Strategy and Consulting groups look for candidates with consulting or industry experience (such as consumer products, goods or retail). Some of our candidates come from consulting firms such as A.T. Kearney and McKinsey."

The Strategy & Business Development group at Gap identifies, develops and drives longer-term strategies and initiatives that will result in profitable growth (usually with a focus on new opportunities). "Strategy involves brand management, research, as well as planning," says Hillary. Consulting and Assurance Services involves financial/operational analysis, process analysis and design and project management. Basically, this group acts as an internal consulting group for Gap. They may work with outside consultants and vendors.

Getting Hired

Build your resume correctly and you can get the interviews you need. In apparel, most of the job functions are very specific, such as design, merchandising, marketing, production and so on. Because many of the companies are small, there aren't very many traditional MBA "management" positions. Many of the people who work at these companies may have gone to trade schools or been in the industry for a long time. For example, the president of Gucci used to work as vice president at Richard Tyler. He was young when he left Richard Tyler for Gucci, but he had started working there when he was 18.

The Gap, Limited, and Eddie Bauer all have internal consulting groups that traditionally hire MBAs. If you are interviewing for an internal consulting position, more than likely it will resemble a traditional consulting interview. You may be given a case study as part of the interview. (See the Vault Guide to the Case Interview for more information on this type of business interview.) Other jobs at fashion companies for MBA graduates may include planning, finance, or strategy.

Pay and Perks

MBA jobs in the fashion industry will not pay well in comparison with other MBA graduate options. Salaries may hover around the \$50,000 mark. There are several options here—you work to get the experience or to learn enough to start your own business. If you are thinking of the latter, gain experience that will help you manage your own business. For example, if you want to open your own jewelry store, get a job merchandising or selling jewelry. The best way to learn all sides of the business is to experience it yourself. The pay in the fashion industry is more negotiable than other industries. Most companies will not release this information and, because these jobs are not necessarily geared toward MBAs, the salaries are not standard.

Vault Profile: Judy Chang, Fashion MBA

Judy Chang graduated from the Anderson School at UCLA with a MBA in 2002. Her previous education included a BS and Master's in industrial and operations engineering from the University of Michigan. After college, she worked as a Program Manager for DaimlerChrysler to coordinate the launch of a particular program in the automotive plants. Judy says, "I would work on program launches for each car model year and style (for specific windshield specifications). I came to Anderson knowing that I wanted to do something totally different." Judy also says, "If you really want to change careers, getting an MBA is essential. Without my MBA, I don't think I would have been able to switch careers successfully. Fashion companies would have looked at my resume and questioned my interest."

At the Anderson School, her emphasis was marketing, and it was the first time she began to seriously consider a fashion career. She had worked at Armani Exchange during college and enjoyed it—but didn't think that fashion would be a practical career choice. At Anderson, she joined the Fashion and Retail Association and began to do her research so that she could merge her interests and career goals. On campus, Macy's and Neutrogena came for interviews. Through the database, she found alumni and contacted them to speak about their experiences. Judy landed a summer internship in Planning at Macy's West. She worked there for three months in the summer and is now there full-time.

At Macy's West, Judy did two projects over the summer. (The department store Macy's is split into two regions and run completely separately. Macy's East is headquartered in NYC, while Macy's West is based in San Francisco.) To her surprise, Judy's operations experience was extremely relevant during the internship. Her first project was about handbag assortments. Her goal was to figure the optimum assortment level. Judy analyzed the number of styles bought for each cluster of stores, available table space for the handbags and discounted handbag sales versus regular stock. She used Macy's sales data as well as active visits to the Macy's floor to make her recommendations. Her second project was to standardize colors across a group of buyers. Each buyer used an individual color coding system. Macy's had no way of tracking sales by color or across categories. For example, although each buyer bought "red," each red item could be a completely different shade. Judy created a color tracking system that allowed the planners to analyze the sales by color and buyer. Macy's could now see which color sold during any a one-week period.

During her internship, Judy was excited to go to work everyday (especially compared to her previous position). She found everyone to be supportive and very friendly. Macy's was a very different experience for her. Judy says, "At Macy's, it seemed like the workforce was 90 percent women and only 10 percent men. At DaimlerChrysler, I used to work with 90 percent men and 10 percent women. If there is something you really think will make you happy, you should do it—even in this difficult economy."

This section was excerpted from the *Vault Career Guide to the Fashion Industry*. Get the inside scoop on fashion industry careers with Vault:

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Fax: (614) 283-6710
www.abercrombie.com

Ann Taylor Stores Corporation

100 Ann Taylor Drive
P.O. Box 571650
Taylorsville, UT 84157-1650
Phone: (212) 541-3300
Fax: (212) 541-3379
www.anntaylor.com

The Body Shop International PLC

Watersmead
Littlehampton
West Sussex BN17 6LS, United Kingdom
Phone: +44-1-903-731-500
www.the-body-shop.com

Chanel S.A.

135, Avenue Charles de Gaulle
92521 Neuilly-sur-Seine Cedex, France
Phone: +33-1-46-43-40-00
www.chanel.com

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20122 Milan, Italy
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www.dolcegabbana.it

Donna Karan International Inc.

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www.eddiebauer.com

Estee Lauder Companies Inc.

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New York, NY 10153-0023
Phone: (212) 572-4200
Fax: (212) 572-6633
www.elcompanies.com

Federated Department Stores

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Gap Inc.

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www.gapinc.com

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www.guess.com

J. Crew Group Inc.

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Fax: (503) 671-6300
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Fax: (920) 231-8621
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Polo Ralph Lauren Corporation

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New York, NY 10022
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Fax: (212) 888-5780
www.polo.com

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Retail brokers/PCS representative

In addition to PCS representative, some firms call them account executives, others call them financial advisors, and still others give them the financial consultant moniker. Regardless of the official designation, firms are still referring to your classic retail broker. The broker's job involves managing the account portfolios for individual investors—usually called retail investors. Brokers charge a commission on any stock trade and also give advice to their clients regarding stocks to buy or sell and when to buy or sell them. To get into the business, retail brokers must have an undergraduate degree and demonstrated sales skills. The Series 7 and Series 63 examinations are also required before selling commences. Having connections to people with money offers a tremendous advantage for a starting broker.

Slowing down but no signs of stopping

Typically, where the equities markets go, the brokerage industry follows, which means the brokerage industry is alive and well, if not kicking as strongly as it was a few years ago. In 2005, after enjoying two straight years of solid gains, the major stock indices slowed. The Dow Jones Industrial Average even decreased slightly by 0.61 percent during the year, after rising 3.15 percent in 2004 and 25 percent in 2003. The S&P 500 only increased 3 percent in 2005, after rising 9 percent in 2004 and 26 percent in 2003. And the Nasdaq Composite Index rose 1.4 percent in 2005, following an 8.6 percent increase in 2004 and 50 percent rise in 2003.

In 2006, though, the markets began picking up steam again. Through mid-April, the DJIA had risen 3.9 percent, the S&P 500 had increased 3.4 percent and the Nasdaq Composite had shot up 5.7 percent. As a result of the steady though modest gains in the equity markets in the past two years, some of the top retail brokerage firms have continued to cash in. In 2005, Merrill Lynch's brokerage unit boosted net revenue by 10 percent, pretax earnings by 16 percent and total assets in brokerage accounts by 8 percent. And in the first quarter of 2006, Merrill's brokerage unit increased net revenue by 13 percent versus the same period a year earlier. Morgan Stanley, meanwhile, increased retail brokerage net revenue by 6 percent in 2005 and total client assets increased by 2 percent, though the firm did show a decline in retail brokerage pretax income.

Credit Card Services

Issuing credit cards is one of the most common ways in which financial services firms provide credit to individuals. Via the credit card, firms provide individuals with the funds required to purchase goods and services, and in return, individuals repay the full balance at a later date, or make payments on an installment basis. Via the debit card, people avoid debt by withdrawing the purchase amount from their bank accounts and transferring it to the seller. Though you're most likely familiar with how credit and debit cards work, you might not be familiar with just how large the card industry is today. According to the *Nilson Report*, more than 1.9 trillion credit or debit cards were circulating worldwide at the beginning of 2004; in the U.S., more than 847 million cards were in circulation. In 2005, American Express, Discover, MasterCard and Visa branded credit and debit cards generated \$2.14 trillion in purchase volume, credit cards accounting for \$1.75 trillion in purchases and debit cards for \$872 billion. The two largest branded cards, Visa and MasterCard, increased circulation by a combined 68.6 million in 2005, rising to 862.5 million outstanding. Credit cards still make up the majority of the market, but debit cards are gaining traction. In 2005, of total cards in circulation, 31 percent were debit cards, up from 29 percent in 2004. The most popular card is the Visa credit, followed by MasterCard credit, then Visa debit, American Express credit, MasterCard debit and Discover credit. According to the *Nilson Report*, in 2005, the average U.S. household had 12.7 payment cards.

Heavy metal

The credit card traces its roots back to 1914 when Western Union began doling out metal cards, called "metal money," which gave preferred customers interest-free, deferred-payment privileges. Ten years later, General Petroleum Corporation issued the first metal money for gasoline and automotive services, and by the late 1930s, department stores, communication companies, travel and delivery companies had all begun to introduce such cards. Then, companies issued the cards, processed the transactions and collected the debts from the customer. The popularity of these cards grew until the beginning of World War II, when "Regulation W" restricted the use of cards and, as a result, stalled their growth.

After the war, though, cards were back on track. Modes of travel were more advanced and more accessible, and more people were beginning to buy expensive modern conveniences such as kitchen appliances and washing machines. As a result, the credit card boomed in popularity, as consumers could pay for these things on credit that otherwise they couldn't afford to buy with cash.

Charge-it

In 1951, New York's Franklin National Bank created a credit system called Charge-It, which was very similar to the modern credit card. Charge-It allowed consumers to make purchases at local retail establishments, with the retailer obtaining authorization from the bank and then closing the sale. At a later date, the bank would reimburse the retailer and then collect the debt from the consumer. Acting upon the success of Franklin's Charge-It, other banks soon began introducing similar cards. Banks found that cardholders liked the convenience and credit line that cards offered, and retailers discovered that credit card customers usually spent more than if they had to pay with cash. Additionally, retailers found that handling bank-issued cards was less costly than maintaining its own credit card program.

Also in the 1950s, the Diner's Club charge card was created. This card, which gave users 60 days to make repayment, was the first to allow consumers to pay for goods and services from a variety of retailers. Another 1950s credit card milestone was the BankAmericard, created by California's Bank of America. The BankAmericard was the first "revolving credit" card—it gave cardholders the option to pay their debts in whole, or in monthly minimum payments while the issuers charged interest on the remaining balances.

The association and the Master

Bank of America continued its credit card innovations in the 1960s with the introduction of the bank card association. In 1965, Bank of America began issuing licensing agreements that allowed other banks to issue BankAmericards. To compete with the BankAmericard, four banks from California formed the Western States Bankcard Association and introduced the MasterCharge. By 1969, most credit cards had been converted to either the MasterCharge (which changed its name to MasterCard in 1979) or the BankAmericard (which was renamed Visa in 1977).

Cutting the cost of transaction processing and decreasing credit card fraud were the next innovations introduced to the industry. Electronic authorizations, begun in the early 1970s, allowed merchants to approve transactions 24 hours a day. By the end of the decade, magnetic strips on the back of credit cards allowed retailers to swipe the customer's credit card through a dial up terminal, which accessed the issuing bank card holder's information. This process gave authorizations and processed settlement agreements in a matter of minutes. In the 1980s, the ATM (Automatic Teller Machine) began to surface, giving cardholders 24-hour access to cash.

The debut of the debit, the climb of the cobrand

The 1990s saw the debit card rise in popularity. The debit card grew from accounting for 274 million transactions in 1990 to 8.15 billion transactions in 2002. The 1990s also witnessed the surge of cobranded and affinity cards, which match up a credit card company with a retailer to offer discounts for using the card (think Citibank's AAdvantage cards and American Express' Mileage Rewards program). Although cobranded cards took a dip in the late 1990s—according to some industry experts, this was because issuers had exhausted the most lucrative partners—they've recently returned in full force. Consider that in 2003 alone, MBNA (now a part of Bank of America), struck some 400 new deals with various companies such as Merrill Lynch, Royal Caribbean and Air Canada. Additionally, it renewed deals with another 1,400 organizations, including the National Football League and the University of Michigan. And in 2004, MBNA signed agreements with numerous other companies and organizations such as A.G. Edwards & Sons, the Massachusetts Institute of Technology, Arsenal Football Club (U.K.), Starwood Hotels and Resorts, and Charles Schwab.

And then there were four

In September 2003, a federal court upheld a lower court ruling that cost credit card powerhouses Visa and MasterCard a combined \$3 billion. The court found Visa and MasterCard rules preventing the companies' member banks from also issuing American Express and Morgan Stanley's Discover cards to be illegal and harmful to competition. MasterCard was forced to pay \$2 billion in damages and Visa paid \$1 billion.

In October 2004, the U.S. Supreme Court decided not to hear Visa and MasterCard's appeal in the government's antitrust suit against them, effectively ending the two companies' rules that have prevented banks from issuing cards on rival networks. As a result, Amex and Discover became free to partner with the thousands of banks that issue Visa and MasterCard, which should allow Amex and Discover to gain ground on the two credit powerhouses that, together, control about 79 percent of the U.S. credit card market (as of August 2004).

Upon the initial ruling in September 2003, Amex CEO Kenneth I. Chenault said, "We plan to add more partnerships with other issuers on a selective basis, ensuring they are a strategic fit for our brand and can drive more high-spending customers to the merchants on our network." In 2004, David W. Nelms, chairman and CEO of Morgan Stanley's Discover Financial Services unit, told *BusinessWeek* that the ruling "will create competition in our industry for the first time."

That competition is expected to be intense, say insiders. According to *BusinessWeek*, U.S. consumers use cash or checks to pay for about 59 percent of their \$8.2 trillion in transactions each year. That leaves \$4.8 trillion in cash outlays for credit card companies to capture. The *Nilson Report* estimates that debit- and credit-card spending will grow 13 percent a year from

2005 to 2008. "You're talking about the most profitable retail banking product in the world," *Nilson* publisher David Robertson told *BusinessWeek* in August 2004. "The competition among the titans is going to be fierce." He added, "They are already clobbering each other."

Re-Discovering the possibilities

In the midst of Morgan Stanley's great personnel exodus of March 2005, the firm announced plans to spin off its Discover credit-card unit. The reason for the plan, according to former Morgan Stanley CEO Philip Purcell, was Discover "will be more properly valued as a stand-alone entity" than as a piece of Morgan Stanley. Soon after the announcement, analysts began estimating the Street value of the huge credit card unit. The range fell anywhere between \$9 billion and \$16 billion. Analysts also disagreed over whether or not the spin-off would maximize shareholder value.

However, new Morgan Stanley CEO John Mack's first big move at the helm, after taking over the reins in mid-2005, was to reverse course on the Discover business. "Discover is not only a strong business, but also an attractive asset for Morgan Stanley," Mack said in a statement. "It is a unique, successful franchise with growth opportunities that gives Morgan Stanley a consistent stream of stable, high-quality earnings and substantial cash flow, diversifies the company's earnings and broadens our scale and capital base."

In 2004, the numbers certainly supported Mack's statement. Discover delivered record before-tax earnings of \$1.27 billion in 2004, representing 19 percent of Morgan Stanley's total before-tax earnings. In January 2005, Discover acquired the fast-growing PULSE debit network, which had more than 4,100 financial institution customers. The unit also recently formed a partnership with China UnionPay, China's largest payment network with 800 million cards, and new partnerships with GE Consumer Credit mean that the Discover Network can offer Wal-Mart- and Sam's Club-branded cards. In its 2005 fiscal year, though, Discover's net revenue and pre-tax income declined, by 2 percent and 25 percent, respectively.

The big buy

In June 2005, BofA went big again, following its \$49-billion purchase of FleetBoston Financial in 2003 with the announcement that it would acquire credit card behemoth MBNA in a deal worth \$35 billion. The purchase made Bank of America one of the largest card issuers in the U.S., with \$143 billion in managed outstanding balances and 40 million active accounts. Bank of America added more than 20 million new customer accounts as well as affinity relationships with more than 5,000 partner organizations and financial institutions. Bank of America also expects to achieve overall expense efficiencies of \$850 million after-tax, which would be fully realized in 2007, and anticipates a restructuring charge of \$1.25 billion after-tax. Cost reductions will come from a range of sources, including laying off 6,000 employees.

The big IPO

At the end of August 2005, MasterCard, which became a private share corporate in 2002, announced that it plans to become a publicly traded company. It will launch an IPO sometime in 2006, and adopt new corporate governance and an open ownership structure that will include the appointment of a new board of directors, comprised mostly of independent directors, and the establishment of a charitable foundation. Under the new corporate governance and ownership structure, MasterCard's current shareholders, approximately 1,400 financial institutions worldwide, are expected to retain a 41 percent equity interest in MasterCard through their ownership of non-voting Class B common stock. In addition, existing shareholders will receive Class M common stock that will have no economic rights but will provide them with certain rights, including the right to elect several directors from financial institutions around the world. The deal is estimated to eclipse Google's \$1.92 billion IPO in 2004, as analysts estimate that MasterCard could raise up to \$2.45 billion in the offering, for which Goldman Sachs is acting as the lead underwriter.

No contact credit

“Contactless” cards and finger-swiping systems are the latest advances in the world of plastic purchasing. By the end of 2005, banks had issued 3.5 million debit and credit cards that do not need to be run through machines but simply scanned via radar-like beams. Already, these cards can be used at retailers like McDonald’s, 7-Eleven and CVS. And by the end of 2006, banks are expected to have issued 25 million contactless debit and credit cards, according to the *Nilson Report*. Other than not having to run the cards through a machine, a benefit is for purchases less than \$25, a signature isn’t required.

Another no contact credit payment system is now in place: the pay-by-finger system. All you have to do is press your finger (its print) against a device, enter some personal information, such as your phone number, on a keypad and your payment is made; fingerprints are linked up with credit or debit cards. The system is already in place at hundreds of U.S. supermarkets such as Albertsons and Piggly Wiggly.

Insurance

Risky business

The insurance industry is a multi-trillion-dollar market dealing in risk. In exchange for a premium, insurers promise to compensate individuals and businesses for future losses, thus taking on the risk of personal injury, death, damage to property, unexpected financial disaster and just about any other misfortune you can name. According to the Insurance Information Institute (III), in 2004 the industry contributed over \$269 million (2.3 percent) to the U.S. GDP.

The insurance industry is commonly divided into categories such as life/health and property/casualty. Life dominates the mix, making up about 60 percent of all premiums. The bigger categories can be subdivided into smaller groups; property, for instance, may cover homeowner’s, renter’s, auto and boat policies, while health is made up of subsets including disability and long-term care.

These days, though, you can find insurance for just about anything: weddings, bar mitzvahs, the chance of weather ruining a vacation—even policies for pets, a \$160 million market in 2005, with growth of a quarter expected in 2006, according to research firm Packaged Facts. Even insurance companies themselves can be insured against extraordinary losses, by companies specializing in reinsurance. Celebrity policies always get a lot of press: though rumors that Jennifer Lopez had insured her famous asset (sorry) for \$1 billion proved to be unfounded, other such policies do indeed exist. In fact, the phrase “million dollar legs” comes from Betty Grable’s policy for that amount (a similar policy is held by TV’s Mary Hart); other notable contemporary policies include Bruce Springsteen’s voice, reportedly covered at around \$6 million.

The world’s top five

Though the United States is, on average, ahead of the rest of the world in terms of insurance coverage, insurance is a truly global industry. Ranked by 2005 revenue data from the III, the top five U.S. insurance companies are American International Group (AIG), Berkshire Hathaway, State Farm, Allstate and Hartford Financial Services. Other leaders abroad include Germany’s Allianz, France’s AXA, the Netherlands’ ING, England’s Lloyd’s and Italy’s Assicurazioni Generali. Other leading American insurers include Travelers, Nationwide, Loews, Progressive and Chubb.

And consolidation is the name of the game—Hoover’s reports that the top ten property/casualty insurers account for nearly half of all premiums written. Perhaps the most notable example of the mania for mergers and acquisitions in the industry was the \$82 billion merger in 1998 between Citicorp and the Travelers Group, which created Citigroup. Some insurance companies have also begun to reconfigure themselves from mutual insurers, or those owned by policyholders (e.g., State

Farm), to stock insurers, or those held by shareholders (e.g., Allstate). This process, known as “demutualization,” promises to raise even more capital for insurance companies to indulge in more acquisitions.

Insurance investigations

Of late, life at the top for a number of insurance heavyweights has been less than perfect. An investigation by federal and state prosecutors into AIG’s accounting practices revealed accounting problems that forced the company to reduce reported profits by nearly \$4 billion over five years, largely the fault of former CEO Maurice Greenberg and former CFO Howard Smith. Greenberg, personally picked by AIG founder Cornelius Vander Starr to steer the company, stepped down from his post in March 2005 after nearly four decades on the job. That May, New York State Attorney General Eliot Spitzer filed a complaint against AIG, Greenberg and Smith, over accusations of securities fraud, common law fraud and a number of violations of insurance and securities laws.

Additional investigations are popping up. In May 2005, Chubb received a subpoena from federal prosecutors investigating its use of nontraditional insurance that could artificially boost financial results. The announcement came on the heels of a November 2004 statement that Spitzer’s office, in an investigation into bid-rigging practices between insurance brokers and insurers, requested information from Chubb, along with a number of other companies. At that point, executives at AIG had already pleaded guilty to such practices. And in June 2005, Allstate agreed to pay \$34 million in restitution and fines to settle claims from California insurance regulators, who had accused the company of overcharging on a quarter of a million policies over a five-year period. In July 2005, Marsh & McLennan was accused of manipulating bids and receiving kickbacks for funneling business, but settled with New York State later that year for \$850 million. The following year, the company was again facing a lawsuit, this time based on securities fraud and bid rigging.

Though the headlines have mostly come from major corporations, the ripple effects of such negative press have leaked across the entire industry. As a case in point, the FBI launched a nationwide review of insurance practices at more than 7,000 companies in May 2005, looking for problems in accounting patterns similar to those found at AIG. According to a report in *The New York Times* that same month, many industry officials were surprised at the review, while others said it was “premature” for the bureau to associate AIG’s cooking of its books with the industry as a whole.

Branching out

The last quarter-century has seen a shift in the industry away from life insurance toward annuity products, focusing on managing investment risk rather than the (obviously inevitable) risk of mortality. With increasing deregulation in the U.S. and Japan, these insurers are moving ever closer to competition with financial services firms. Indeed, the business of the insurance industry doesn’t end with insurance. The world’s top companies have broadened their array of financial services to include investment management, annuities, securities, mutual funds, health care management, employee benefits and administration, real estate brokerage and even consumer banking. The move towards financial services follows the 1999 repeal of the Glass-Steagall Act, which barred insurance companies, banks and brokerages from entering each other’s industries, and the Gramm Leach-Bliley Act of 1999, which further defined permissible acts for financial holding companies. Now insurance companies are free to partner with commercial banks, securities firms and other financial entities.

At the speed of the Internet

Like many other industries, the insurance market has been transformed in recent years by the Internet. Traditionally, insurance products have been distributed by independent agents (businesspeople paid on commission) or by exclusive agents (paid employees). But insurers who sell over the Web reap the benefits of lower sales costs and customer service expenses, along with a more expedient way of getting information to consumers. Though few insurers have moved to 100 percent online vending of their policies, the vast majority have found it helpful to provide quotes on their web sites.

A new threat

The September 11 terrorist attacks sent shockwaves through the insurance industry, not only costing insurers roughly \$23.5 billion in property-related losses and \$40 billion in other associated claims, but also causing insurers and reinsurers to take a hard look at how they would handle the risks associated with possible future terrorist acts. The Terrorism Risk Insurance Act (TRIA), signed into law by President Bush in November 2002, aimed to deal with the nearly incalculable risk posed by this threat. Among other things, the law defined a terrorism-related event as one with a minimum of \$5 million in damages, along with providing for the sharing of risk between private insurers and the federal government over a three-year period, with each participating company responsible for paying a deductible before federal assistance is available. If losses are incurred above the insurer's deductible (much as with an individual who must undergo a costly operation), the government is obliged to pay 90 percent. While the measure met with much grumbling from all parties involved, for the most part the industry acknowledged that the plan at least allows for the potential risk to insurers from terrorism-related disasters to be quantified.

TRIA was extended for two years in December 2005. However, provisions of the extension reduced the government's exposure, putting more of the burden on private insurers. The act mandates increases in the amount of damage an event must cause before the government steps in over the life of the bill—in 2006 a terrorist act must cause \$50 million in damage to be certified as such, and in 2007 the deductible doubles to \$100 million.

When disaster strikes

Despite the catastrophic destruction of September 11, the nation's most costly insurance incidents come straight from the Mother Nature. The hurricane season of 2004, during which a succession of four hurricanes battered the Southeast, racked up insured property losses estimated at \$22.9 billion, exceeding the property damage incurred on September 11 by \$3 billion. Florida lawmakers passed a bill that December that eliminated multiple hurricane deductibles as of May 2005. The 2004 season also brought on more than two million separate insurance claims, a number far greater than the 750,000 filed following 1992's Hurricane Andrew. For the full year 2004, insured catastrophe losses (including tornadoes, hurricanes, terrorism, winter storms, earthquakes, wind/hail/flood and fire) were estimated at a record \$27.5 billion.

The 2004 hurricane season, however, pales in comparison to 2005's, the most active in recorded history, and during which 15 hurricanes formed in the Atlantic. The most destructive of these was Katrina, a category 3 storm which devastated New Orleans and the Gulf Coast at the end of August, causing \$100 billion in damages, twice that done by Andrew. More than 1 million claims were filed against some \$40 billion of insured property. Hurricanes Rita and Wilma, which reached category 5, also damaged the Gulf Coast and South Florida, respectively. Insurers fear that cyclical weather patterns—as well as, many believe, global warming—augur an increase in hurricane numbers and severity.

Insurance companies are, unsurprisingly, doing what they can to mitigate the risks of future hurricane seasons. National Oceanic and Atmospheric Administration (NOAA) predictions, released in May 2006, indicate an 80 percent chance of an "above normal" hurricane season with particularly strong storms, including four to six storms of category 3 or higher. In order to prevent losses of the sort that attended the hyperactive 2005 season, insurers such as Allstate are refusing to insure or renew policies on houses in coastal regions. Instead, companies are concentrating on wooing policyholders in the Midwest, which is less prone to natural disasters (tornadoes notwithstanding). The insurers that still write policies for coastal regions are charging higher premiums—*The Economist* reports that they have surged 200 percent in some areas. Updated disaster prediction models and higher reinsurance rates are blamed for these significant price jumps.

Fraud: the \$100 billion challenge

Another industry issue is fraud—not the kind perpetrated by rogue executives, but rather the kind done by Joe Q. Public, which costs an estimated \$85 to \$120 billion per year, according to the III. The institute's data shows that in 2004 property/casualty insurance fraud cost the industry \$30 billion, while auto insurance fraud racked up \$14 billion in false

claims. Topping the cake is health care fraud, which costs the nation a whopping \$95 billion on an annual basis, according to some estimates. Fraud comes in two flavors, “hard” and “soft,” with hard fraud being a deliberate invention or staging of an accident, fire or other type of insured loss to reap the coverage. Soft fraud, meanwhile, covers policyholders’ and claimants’ exaggeration of legitimate claims, such as when victims of burglaries overstate the value and amount of lost property, or when car accident claimants pad damage claims in order to cover their deductibles.

Unhealthy healthcare

Medical malpractice is another hot topic. Health insurers generally get a bad rap from the public: in 2005, only 9 percent of those polled thought that health insurance companies were “generally honest and trustworthy,” and only 5 percent of respondents thought that HMOs had similar qualities. (Only tobacco and oil companies were rated as less trustworthy.) The media and politicians (neither of which the public considers very trustworthy, for that matter) give plenty of air time to horror stories about managed care companies slighting critically ill patients, and insurers refusing to cover necessary treatments or technologies. Is this reputation deserved? It depends on who you ask, but the industry has its own battles in health care—for example, it sees medical malpractice claims, which have skyrocketed in recent years, as a true crisis. Indeed, according to the III, some insurers have quit writing malpractice policies entirely rather than shoulder the risk (the median malpractice award in 2001, the latest year for which this figure is available, was \$1 million). Insurance company Farmers, which racked up more than \$100 million in malpractice-related losses in 2003, announced, not surprisingly, that it would get out of the malpractice game.

A July 2005 study by the Center for Justice and Democracy, a group against tort reform, found that malpractice rates had increased 120 percent between 2000 and 2004, while the amount of money paid in claims increased by a paltry 5.7 percent, and the surpluses collected by insurers increased by 33 percent. Researchers culled data from annual statements filed with state insurance departments from the nation’s 15 biggest medical malpractice insurers. Insurers blasted the study’s methodology, claiming it failed to take into account additional costs insurers face, such as underwriting. The Physician Insurers Association of America (PIAA) reports an average wait time of four and a half years between the time an accident occurs and the time a claim is paid, a lapse which forces companies to collect premiums “based on future cost expectations.”

PIAA president Lawrence Smarr called the study a “meaningless comparison no respectable actuary would consider.” Connecticut Attorney General Richard Blumenthal asked the National Association of Insurance Commissioners to review the study, indicating that such disparate numbers warranted “the need for more much tougher and aggressive oversight to prevent and punish profiteering.” Jay Angoff, a former state insurance commissioner of Missouri, agreed: “In recent years, medical malpractice hasn’t been unprofitable … it’s been phenomenally profitable.” In the meantime, the Bush administration is working to cap malpractice damages in an effort to drive down health care costs (and, more than likely, please the formidable medical lobby).

The whole(sale) story

In a curious twist, Costco Wholesale Corp., the largest wholesale club operator in the U.S., announced the start of a pilot program in July 2005 designed to offer individual health insurance policies to California shoppers maintaining “executive membership” status. The company says the program is geared toward people who cannot get group insurance, such as the jobless or owners of family businesses. For now, Costco insurance is only available in the Golden State, as representatives for the company say spreading insurance to its 18 million members nationwide is most likely unfeasible. Though most analysts say the plan will likely have little effect on the 45 million uninsured Americans from coast to coast, some have suggested that discounters like Costco may spur growth in locally based, low-premium niche plans. Meanwhile, insurance brokers are quietly wondering if Costco’s wholesale plan could have ramifications of Wal-Mart-like proportions on brokerage firms. Glenn Melnick, director of the USC Center for Health Financing, Policy and Management, claims that low-priced health products have the potential to “really shake up the market,” thus forcing insurers to develop more low-cost products.

Working in insurance

According to the U.S. Bureau of Labor Statistics (BLS), the insurance industry employed 2.3 million people in 2004, the most recent year for which full statistics are available. Of these employees, 62 percent worked for insurance carriers; 27 percent for agencies, brokerages and other employers; and the balance of the workforce was made up of the self-employed, generally as sales agents.

Most insurance agents specialize in life and health insurance, or property and casualty insurance. But a growing number of “multi-line” agents sell all lines of insurance. An increasing number of agents also work for banking institutions, non-depository institutions, or security and commodity brokers. Medical, financial and health insurance are among the fastest-growing industry sectors.

Common jobs in the industry include claims adjusters, appraisers, examiners and investigators; marketing and sales managers; customer service representatives; insurance sales agents; underwriters; lawyers; computer systems analysts; computer programmers; and computer support specialists. Data provided by the BLS suggests that though corporate downsizing and changes in business practices will limit growth in the industry over the next few years, a number of job openings are expected as older workers leave or retire.

This section was excerpted from the *Vault Guide to the Top Financial Services Employers* and the *Vault Guide to the Top Insurance Employers*. Get the inside scoop on financial services and insurance careers with Vault:

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Boston, MA 02117
Phone: (617) 572-6000
Fax: (617) 572-9799
www.johnancock.com

JPMorgan Chase

270 Park Avenue
New York, NY 10017
Phone: (212) 270-6000
Fax: (212) 270-2613
www.jpmorganchase.com

KPMG LLP

345 Park Ave.
New York, NY 10154-0102
Phone: (212) 758-0700
Fax: (212) 758-9819
www.us.kpmg.com

Legg Mason

100 Light Street
Baltimore, MD 21202-1099
Phone: (410) 539-0000
Fax: (410) 454-4923
www.leggmason.com

Liberty Mutual Holding Company Inc.

175 Berkeley Street
Boston, MA 02116
Phone: (617) 357-9500
Fax: (617) 350-7648
www.libertymutual.com

Lincoln Financial Group

100 N. Greene Street
Greensboro, NC 27401
Phone: (336) 691-3000
Fax: (336) 691-3938
www.jpfinancial.com

Lloyds TSB Group

71 Lombard Street
London, EC3P 3BS
Phone: 44-20-7626-1500
Fax: 44-20-7356-1731
www.lloydstsb.com

Marsh Inc.

1166 Avenue of the Americas
New York, NY 10036
Phone: (212) 345-5000
Fax: (212) 345-4838
www.marsh.com

Massachusetts Mutual Life Insurance Company

1295 State Street
Springfield, MA 01111
Phone: (413) 788-8411
Fax: (413) 744-6005
www.massmutual.com

MasterCard International

2000 Purchase St.
Purchase, NY 10577
Phone: (914) 249-2000
Fax: (914) 249-4206
www.mastercard.com

Mellon Financial

1 Mellon Center
Pittsburgh, PA 15258
Phone: (412) 234-5000
Fax: (412) 234-9495
www.mellon.com

MetLife, Inc.

200 Park Avenue
New York, NY 10166
Phone: (212) 578-2211
Fax: (212) 578-3320
www.metlife.com

Financial Services and Insurance Employer Directory, cont.

Moody's

99 Church St.
New York, NY 10007
Phone: (212) 553-0300
Fax: (212) 553-7194
www.moodys.com

Oxford Health Plans, LLC

48 Monroe Turnpike
Trumbull, CT 06611
Phone: (203) 459-6000
Fax: (203) 755-3962
www.oxhp.com

Royal Bank of Scotland

RBS Gogarburn
P.O. Box 1000
Edinburgh
EH112 1HQ
United Kingdom
Phone: +44-131-556-8555
Fax: +44-131-557-6140
www.rbs.com

Morgan Keegan & Company

Morgan Keegan Tower
50 Front St., 17th Floor
Memphis, TN 38103
Phone: (901) 524-4100
www.morgankeegan.com

Physicians Mutual Insurance Company

2600 Dodge Street
Omaha, NE 68131
Phone: (402) 633-1000
Fax: (402) 633-1096
www.physiciansmutual.com

Sallie Mae

12061 Bluemont Way
Reston, VA 20190
Phone: (703) 810-3000
Fax: (703) 810-7053
www.salliemae.com

Mutual of Omaha Insurance Company

Mutual of Omaha Plaza
Omaha, NE 68175
Phone: (402) 342-7600
Fax: (402) 351-2775
www.mutualofomaha.com

PricewaterhouseCoopers LLP

300 Madison Avenue
New York, NY 10017
Phone: (646) 471-3000
Fax: (813) 286-6000
www.pwc.com/us

The St. Paul Travelers Companies, Inc.

385 Washington Street
St. Paul, MN 55102
Phone: (651) 310-7911
Fax: (651) 310-3386
www.stpaultravelers.com

Nationwide Mutual Insurance Company

1 Nationwide Plaza
Columbus, OH 43215
Phone: (614) 249-7111
Fax: (614) 249-7705
www.nationwide.com

The Principal Financial Group

711 High Street
Des Moines, IA 50932
Phone: (515) 247-5111
Fax: (515) 246-5475
www.principal.com

Standard & Poor's

55 Water Street
New York, NY 10041
Phone: (212) 438-2000
Fax: (212) 438-7375
www.standardandpoors.com

New York Life Insurance Company

51 Madison Avenue
New York, NY 10010
Phone: (212) 576-7000
Fax: (212) 576-8145
www.newyorklife.com

The Progressive Corporation

6300 Wilson Mills Road
Mayfield Village, OH 44143
Phone: (440) 461-5000
Fax: (440) 603-4420
www.progressive.com

State Farm Mutual Automobile Insurance Company

1 State Farm Plaza
Bloomington, IL 61710
Phone: (309) 766-2311
Fax: (309) 766-3621
www.statefarm.com

Northwestern Mutual

Corporate Headquarters:
720 East Wisconsin Avenue
Milwaukee, WI 53202-4797
Phone: (414) 271-1444
Fax: (414) 665-9702
www.nmf.com

Prudential Financial

751 Broad Street
Newark, NJ 07102-3777
Phone: (973) 802-6000
Fax: (973) 802-4479
www.prudential.com

State Street Corporation

State Street Financial Center
One Lincoln Street
Boston, MA 02111
Phone: (617) 786-3000
www.statestreet.com

Raymond James Financial

880 Carillon Parkway
St. Petersburg, FL 33716
Phone: (727) 567-1000
Fax: (727) 567-5529
www.rjf.com

Financial Services and Insurance Employer Directory, cont.

TD Ameritrade

4211 South 102nd Street
Omaha, NE 68127
Phone: (402) 331-7856
Fax: (402) 597-7789
www.amtd.com

UnumProvident Corporation

1 Fountain Square
Chattanooga, TN 37402
Phone: (423) 755-1011
Fax: (423) 755-3962
www.unumprovident.com

Wells Fargo

420 Montgomery Street
San Francisco, CA 94163
Phone: (800) 411-4932
Fax: (415) 677-9075
www.wellsfargo.com

Thrivent Financial for Lutherans

625 4th Avenue South
Minneapolis, MN 55415
Phone: (800) 847-4836
www.thrivent.com

Visa USA

P.O. Box 194607
San Francisco, CA 94119
Phone: (415) 932-2100
Fax: (415) 932-2529
www.usa.visa.com

W.R. Berkley Corporation

475 Steamboat Road
Greenwich, CT 06830
Phone: (203) 629-3000
Fax: (203) 769-4098
www.wrbc.com

UnitedHealth Group Incorporated

UnitedHealth Group Center
9900 Bren Road East
Minnetonka, MN 55343
Phone: (952) 936-1300
Fax: (952) 936-7430
www.unitedhealthgroup.com

Wachovia

301 S. College Street
Suite 400
Charlotte, NC 28288
Phone: (704) 374-6161
Fax: (704) 383-0996
www.wachovia.com

Unitrin, Inc.

1 E. Wacker Drive
Chicago, IL 60601
Phone: (312) 661-4600
Fax: (312) 494-6995
www.unitrin.com

WellPoint, Inc.

120 Monument Circle
Indianapolis, IN 46204
Phone: (317) 488-6000
Fax: (317) 488-6028
www.wellpoint.com

Government and Politics

Washington, DC has largely been an untapped source of career opportunities for business school students and MBAs. However, several recent trends indicate that MBAs may start looking to Washington for positions not available elsewhere. These trends include a heightened interest in employment with non-profits and a burgeoning effort by some Federal agencies to recruit MBAs. Additionally, there are MBA employers that exist only in Washington, such as the World Bank.

Despite increased interest in hiring MBAs by many of these employers, in general, these organizations have limited and spotty recruiting efforts on business school campuses. The onus remains on interested students to research appropriate opportunities and network with individuals with similar interests. The section below contains a guide to several of the employment options for MBAs in Washington along with advice on how to identify opportunities and successfully apply for positions.

Federal Government

Washington, DC is slowly, but increasingly, becoming more aware of the benefits of the MBA as well as the need to bring in qualified managers with more than just government experience. When George W. Bush was sworn in as the 43rd President of the United States, he was commonly referred to as the “MBA President,” since, as a graduate of the Harvard Business School he is the first chief executive of the United States to hold the degree. Several of his appointments to fill key administration posts were also MBAs, including Elaine Chao, the Secretary of Labor, who received her MBA from the Harvard Business School and Don Evans, the Secretary of Commerce, who received an MBA from the University of Texas. Many other of his top appointments were culled from the world of business, including Paul O’Neil, his first Secretary of the Treasury and former CEO of Alcoa, as well as his replacement, John Snow, who was the head of CSX Corp.

The change at the top has not translated yet into widespread opportunities for MBAs, but the government has grown more receptive to MBAs as it begins to appreciate the skills and capabilities they bring to bear. For example, there have been recent efforts to recruit on MBA campuses. In the 2003 recruiting season, the U.S. Department of the Treasury has visited select campuses seeking to fill internships and full time positions. At times, the CIA has promoted opportunities with MBA programs and advertised for MBAs as part of its financial analysis teams on popular job posting sites, such as HotJobs.com and the Washington Post.

In 2002, Secretary Chao of the U.S. Department of Labor launched an initiative specifically to recruit MBAs to the department. With a large proportion of senior department personnel scheduled to retire in the coming years, Secretary Chao moved aggressively to create a new pipeline of talent and specifically identified hiring MBAs as the future of the department.

Finding a position with the Federal government

As would be expected with the Federal government, bureaucracy rules the hiring process. However, as with any organization, there are paths around the human resources quagmire. MBAs interested in finding an appropriate position with the Federal government should apply the tools emphasized by any career counseling office: identify your interests, find out the general requirements for position, network, and utilize internships.

Since the Federal government is required to post nearly all vacancies, one potential resource to use in identifying appropriate opportunities is its career listing website, www.usacareers.com. However, a word of warning: while the site provides a useful starting point and a valuable research tool, using it exclusively for a job search with the Federal government would sell your efforts short. Instead, for MBAs it can be best used as means to examine the types of positions available and the general salary ranges. Still, even the position descriptions can be overly bureaucratic, and therefore the site should only be considered a starting point in the research process.

According to several MBAs employed by the federal government in Washington, the best way to identify opportunities is by networking with those already working in the Federal government and with those in the nonprofits and other entities that regularly partner or interact with the Federal agencies. Two good ways to make such contacts are through MBA alumni networks and student or school sponsored conferences focusing on the public sector and non-profit management.

Applying for positions can also be highly bureaucratic, and again, interested applicants are well advised to use their networks to begin the application process. While all applicants must eventually go through the human resources department to determine whether they are qualified and if so, their pay level, it is far more fruitful to begin the application process with the office one wishes to join than with the human resources department. This is where networking can pay off, since ultimately hiring decisions are made within a specific office for high-level candidates. In fact, many government managers already have an applicant in mind before a position is posted.

One MBA graduate who returned to the Federal government after graduation says that while finding government position can take effort, the MBA is definitely seen as a benefit. "There are a lot of hiring managers who will be receptive to talking with MBAs simply because they hold the credential," he says. "MBAs with a specific interest should seek out managers in the Federal government, send them their resumes, and then try to follow up."

The insider also confirmed that there is a growing awareness of the value of an MBA, but that the government hasn't been fast enough to quickly establish the right recruiting policies to bring more business students into the Federal workforce. "The fact of the matter is that the government just doesn't pay what the private sector does," he says. "But, for those with a strong interest in government work, there are many ways in and many rewarding career paths."

Areas of Interest to MBAs

Since most MBAs aren't interested in becoming lifetime bureaucrats, they usually consider specific opportunities in order to gain the experience they need to advance in their chosen professions. The following are areas of the Federal government that provide career enhancing opportunities:

Community and economic development

Community and economic development is an area that has captured the interest of MBAs. Since community and economic development is often the result of cooperation among public sector, private sector and non-profit entities, a position with the Federal government can be an effective way to build experience, gain contacts within the development community and gain an understanding of the government's role in community and economic development and the resources it makes available.

There are several agencies within the Federal that have community and economic development functions. These include the U.S. Department of Treasury, the U.S. Department of Commerce, and the Small Business Administration. Since roles within each agency will vary with the specific mission of the department, interested candidates should try to learn about each department's operations and opportunities through networking with organizations such as Net Impact, alumni, and by contacting hiring managers directly to discuss opportunities.

Management

There are many opportunities within the Federal government for MBAs to gain management experience. However, these opportunities must be ferreted out, and will depend on what the MBA hopes to gain by joining the Federal government. For example, an MBA with an interest in the Federal budget process could attempt to locate an analyst position with the Office of Management and Budget. Another potential source of management positions will be the newly created Department of Homeland Security. Since the Homeland Security Department will be free of some of the Federal employment regulations

imposed on virtually every other Federal entity, there may be more opportunities for MBAs to utilize their management abilities to a greater degree than elsewhere in the Federal bureaucracy. MBAs need to think creatively about how their skills relate to government management. Since the Department of Homeland Security is being created from programs and agencies run by a variety of Federal entities, it could be thought of in business terms as a “post-merger integration project.” (As of this writing, the Department of Homeland is still being formed. Openings, as they are identified, are posted at the Federal government’s employment site, www.usajobs.opm.gov.

One avenue for MBAs into the Federal government is through the Presidential Management Internship (PMI) program, which is open to all students pursuing masters or doctoral degrees. To be considered for the program, students must submit an application and be nominated by the dean, chairperson, or program director of their academic program. Once accepted, PMIs must find an appropriate position within the Federal government. The program lasts two years, with PMIs beginning at the GS-9 level (approximately \$35,500 to \$46,100. After one year, they are eligible for promotion to the GS-11 level (\$42,900 to \$55,800). At the end of the program, PMI program participants may be converted to a permanent position with the Federal government and are eligible for the GS-12 grade level (\$51,500 to \$66,900). For detailed information on the program, see its web site at www.pmi.opm.gov.

Additionally, the Department of Labor has begun to actively recruit MBAs for general management positions with strong results. For 2002, its first year in operation, Department’s MBA recruitment program reported receiving more than 250 applications for thirty openings. While MBAs start at the GS-9 level, the Department is offering other incentives, including recruitment bonuses and loan forgiveness programs.

Upon acceptance into the program, MBAs will be allowed to rotate through several different assignments before being placed in a permanent position. The permanent assignments are based on the needs of the Department and the long-term interests of each participant.

A senior official working on the program glows about its initial results: “We didn’t know what to expect when we first put the program into place, but we have been very pleased with the results. In fact, several other offices within the Federal government have approached us about putting up similar recruitment programs for themselves.”

Application information is available on the Department’s website at www.dol.gov.

International development

The Federal government also provides options for MBA students interested in International development, a field that has traditionally and still remains dominated by economists.

Since there are no formal recruitment programs in place for MBAs for international development positions with the Federal government, interested students will have to network with both on-campus and outside organizations to uncover opportunities.

The U.S. Department of Treasury’s Office of International Affairs often recruits MBAs for financial analysis positions covering such issues as debt policy or international trade. It particularly is interested in MBA with strong experience in the banking and financial service sector as well as international experience. The office’s recruitment efforts include posting position openings with MBA career offices and general advertising.

Government and Politics Employer Directory

Inter-American Development Bank

1300 New York Ave. NW
Washington, DC 20577
Phone: (202) 623-1000
Fax: (202) 623-3096
www.iadb.org

International Finance Corporation

2121 Pennsylvania Avenue, NW
Washington, DC 20433
IFC switchboard: (202) 473-1000
www.ifc.org

International Monetary Fund (IMF)

700 19th Street, N.W.
Washington, DC 20431
Phone: (202) 623-7000
Fax: (202) 623-4661
www.imf.org

Office of Management and Budget

725 17th Street, NW
Washington, DC 20503
Phone: (202) 395-3080
Fax: (202) 395-3888
www.whitehouse.gov/omb

Small Business Administration

409 Third Street, SW
Washington, DC 20416
Phone: 1-800-U-ASK-SBA
www.sba.gov

U.S. Department of Commerce

1401 Constitution Avenue NW
Washington, DC 20230
(202) 482-2000
www.commerce.gov

U.S. Department of Education

400 Maryland Avenue, SW
Washington, DC 20202
Phone: (800)- USA-LEARN
www.ed.gov

U.S. Department of Justice

950 Pennsylvania Avenue, NW
Washington, DC 20530-0001
Phone: (202) 353-1555
www.justice.gov

U.S. Department of Treasury

1500 Pennsylvania Avenue NW
Washington, DC 20220
(202) 622-1260
www.treasury.gov

U.S. Department of Labor

200 Constitution Ave. NW
Washington, DC 20210 U.S.A.
Phone: (202) 693-6000
Fax: (202) 219-5721
Toll free: (866) 487-2365
www.dol.gov

U.S. Department of State

2201 C Street NW
Washington, DC 20520
Phone: (202)-647-6575
www.careers.state.gov

The World Bank Group

1818 H Street, N.W.
Washington, DC 20433
Phone: (202) 473-1000
Fax: (202) 477-6391
www.worldbank.org

Health Care Industry Overview

An industry in flux

You can't live with it and you can't live without it—this pretty much sums up the attitude many Americans have toward today's health care industry, which is made up of a variety of providers of patient care, including hospitals, nursing homes and physicians, as well as those who help coordinate, manage and pay for that care, like HMOs and other health insurers. It's no secret that the sector is a volatile one: despite making up nearly 15 percent of the nation's gross domestic product (GDP)—U.S. health care spending totaled \$1.8 trillion in 2004, more than \$6,000 per capita—the industry has had a tough time figuring out how to turn a profit in such a way that benefits both providers and patients. One reason for this is that the industry's growth rate has consistently outpaced that of the overall economy in recent years. Economists predict health care spending will make up 18.7 percent of the country's GDP in 2014, a percentage considered unsustainable by many analysts. It is estimated that the public sector will pay for nearly half of all health spending in the U.S. by that year—not a healthy number.

Having a senior moment

According to the American Association of Retired Persons (AARP), by the year 2050 seniors will outnumber children for the first time ever. With approximately one million people turning age 60 each month worldwide, the phenomenon known as "global aging" promises to have a profound effect on the demand for and delivery of health care services. This shift is sparking interest in all issues affecting senior health, from preventative care to programs promoting home care and assisted living as alternatives to the oft-dreaded nursing home option.

Creaky Medicare

The United States' aging population is also putting pressure on the nation's reimbursement system for seniors and low-income patients. The Medicaid program is funded by the federal government but administered by the states, serving low-income individuals who do not have access to health care through their employers, while the Medicare program serves people over the age of 65. Because of this, the federal government looms large in health care. In fact, ranked by sales, the government's own Centers for Medicare & Medicaid Services (CMS) ranks No. 1 in the industry. Around 40 million Americans are eligible for Medicare coverage, more than twice as many as when the program was first established in 1966 under President Johnson. In 2005, Medicare spending came to \$330 billion. Expenditures from the program are expected to be 3.2 percent of GDP in 2006, rising to 11 percent of GDP by 2008.

Claims are submitted by health care providers through carriers, companies that have contracted with the government to serve as middlemen in the payment process. After the patient navigates a tricky set of rules governing coverage, these claims are either accepted or denied by the contractors. Top Medicare contractors include private not-for-profit BlueCross BlueShield organizations in a number of states, plus other companies such as publicly-held Aetna and Humana. Shareholders of these companies have seen their stock climb as seniors sign up in droves for prescription drug coverage, driving up profits.

The Medicare program, perennially the subject of reform packages in Congress, has long been a political hot potato. The Bush administration has made several attempts to tweak the program, with mixed results. The revised Medicare drug plan, known as Medicare Part D, which came into effect in 2006, provided seniors with a flurry of plan options provided by various insurance companies. But the byzantine regulations introduced by the plan options left many seniors confused and worried they were not getting the coverage they needed.

New regulations, introduced in July 2006 and set to take effect in 2007, will rejigger the rates at which Medicare compensates hospitals and physicians for various procedures. Compensation for surgeries, such as hip and knee replacements and various cardiac procedures, will be cut by as much as a third. In response, the American Medical Association (AMA) has announced that if compensation for Medicare patients is reduced, physicians will be forced to restrict the number of such cases they can handle. This legislation represents the opening salvo in a series of laws that will try to rein in Medicare spending by 34 percent over the next nine years. Further economic fallout may include hospitals seeking higher reimbursement from insurance companies, which will then raise premiums, further increasing the cost of healthcare.

Flying without a net

The rest of the population—those who aren't eligible for Medicare or Medicaid, some 86 percent—either have to buy private insurance on their own, get it at discounted rates through an employer, or just go without and hope for the best. An alarming number of Americans, including many children, are in the latter category—15 percent of the population at last count, or some 44 million people.

What's more, this number, along with the number of those who must purchase insurance on their own, may well grow. Health care costs have continued to rise, at three times the rate of inflation by some estimates, and employers are increasingly unwilling or unable to pay to insure their employees. An April 2005 report by the *Health Affairs Policy Journal* predicted that the number of non-elderly uninsured Americans will grow to 56 million by 2013. Not only do these people risk financial ruin when faced with unexpected medical emergencies, they're also less likely to rely on routine visits to doctors, dentists and the like to maintain good health, thereby preventing more serious conditions down the line. Reports also indicate that health care is more expensive overall for the uninsured. For example, some hospitals bill uninsured clients a higher rate for the same procedures provided to those with health coverage, since big insurance companies are able to negotiate discounts with providers, and uninsured individuals are more likely to default on their payments due to bankruptcy.

The situation isn't so rosy for consumers fortunate enough to have coverage, either. Private health insurance companies paid for 35 percent of the total health care expenditures in the U.S. in 2002, or nearly \$550 billion. But as the cost of providing health care coverage continues to rise, many employers are finding they can no longer afford this benefit, and are passing more of the costs on to employees in the form of higher premiums and stingier reimbursement plans. In an effort to remedy this situation, the AMA is currently at work on a plan that mixes private and public sector financing to benefit the uninsured and improve quality of care and patient choice, with features like tax credits for the purchase of insurance and a wide range of affordable insurance options.

Unmanageable care

Managed care, which arose in the 1980s and 1990s as a response to rampant inflation in health care costs, has changed the face of the industry. Under these managed care systems, insurers realized that they could rein in costs by establishing networks of providers who participate in a health maintenance organization (HMO), which in turn covers a host of insured patients' needs. But in order for the reimbursement to be profitable, health care providers have to curb their own costs. This includes keeping strict limits on the amount of time they spend with patients to maximize the number of appointments they can squeeze in during a day—leading to the hour-in-the-waiting-room, five-minutes-in-the-exam-room doctor visits many Americans experience today. Top managed care companies include Anthem, HealthNet and UnitedHealth Group.

As illustrated by Hollywood dramas, prime-time news programs, and even the 2000 Gore presidential campaign, the public largely sees HMOs as stingy and heartless, willing to deny—via an impenetrable system of rules and limits—society's neediest members basic procedures that are deemed too costly or unnecessary. For their part, managed care organizations argue that without these limits, the cost of health care would rise for everyone in the network (and society at large), nullifying

the benefits of such a system. Meanwhile, the government has gotten into the managed care game, allowing patients to participate in its “Medicare+Choice” program, which also operates under the provider network philosophy.

The doctor will see you now

At the other end of the spectrum, consumers who can flash the cash increasingly are turning to “concierge” or “boutique” physician practices. These private practices offer the attentive, personal and thorough care associated with the pre-HMO days of house calls and Norman Rockwell paintings-for a price. Patients shell out an annual fee up front that can range from several hundred to tens of thousands of dollars to join an exclusive roster of clients seen by a participating internist. So rather than scrambling to see up to 30 patients a day (as in a typical managed care practice), boutique physicians can limit their number of cases to a select handful. Some of these practices charge for appointments above and beyond the annual fee (which is just a sort of retainer for their services), while some accommodate reimbursement by health plans for things like specialized tests. As health care costs skyrocket and patients grow frustrated with insurance plans and the quality of managed care, these practices are becoming more popular-and profitable-business options for those doctors who don’t see exclusive care for the well-off as an ethical dilemma.

The quest for reform

Every time campaign season rolls around, the health care crisis gets a lot of buzz-but since Hilary Clinton’s attempt to create a universal coverage plan was shot down early in her husband’s tenure, few mainstream candidates have been willing to outline a specific, coherent reform strategy. In fact, rejection of sweeping health care reform is somewhat of a tradition in the U.S., going back to the days when President Truman stumbled in the 1940s after introducing a universal coverage proposal. In addition, according to an April 2004 *BusinessWeek* article, of those citizens who actually get out and vote each season, a large majority (92 percent in 2000) have health insurance anyway, so it doesn’t necessarily pay for politicians to run on fixing the problem of the uninsured. So while many reformers say a “single-payer plan”-one in which the government assumes administration of all health care costs-is the only reasonable way to tame the coverage dragon, it may be a while before a viable plan takes shape.

Liability looms

Another type of reform that gets plenty of congressional buzz is in the area of medical malpractice liability, which the powerful AMA has made its top priority. The association has taken to identifying states that are in a “medical liability crisis” owing to exploding insurance premiums and their effect-providers limiting or halting certain services because of liability risks. As of July 2006, there were 22 states on the AMA’s list. One such state, Massachusetts, is a case in point: according to Massachusetts Medical Society research, 50 percent of the state’s neurosurgeons, 41 percent of orthopedic surgeons and 36 percent of general surgeons had been forced to limit their scopes of practice due to insurmountable medical liability costs.

The Bush administration said an end to “junk lawsuits” was one of its primary goals for the president’s second term, calling for “medical liability reform that will reduce health care costs and make sure patients have the doctors and care they need.” In the early months following his January 2005 inauguration, Congress passed Bush-backed legislation to restrain class-action lawsuits and overhaul bankruptcy laws. However, Bush’s influence has not fared as well for the “med-mal” bill, which was passed through the House but not the Senate. Bush’s proposal would have limited to \$250,000 the amount a health provider could be required to pay a patient for “pain and suffering” beyond actual cost of medical services; the proposal also provided for payout of judgments over time instead of in a lump sum.

It’s a seemingly unending loop: multi-million-dollar judgments against providers, brought by a solid industry of trial lawyers devoted to representing mistreated patients, make headlines regularly. These judgments then cause liability insurers to panic,

with many refusing to cover health care providers at all. As such, the insurers who have stayed in the medical liability market charge a premium providers increasingly can't afford to pay.

For lawmakers, the issue is a tough one: how do you set a cap on the amount a plaintiff can receive for the preventable death of a loved one? Patient advocates frame the issue as a David-versus-Goliath scenario, charging that the monolithic medical community wants to limit consumers' rights to sue providers for poor care. Meanwhile, as the industry waits for the federal government to come up with a solution, states have begun to tackle the issue themselves, setting their own limits on the amount of money a malpractice judgment can reap for the plaintiff. Voters in the state of Texas, which was listed on the AMA's liability list, recently approved a constitutional amendment capping awards for non-economic damages at \$250,000. (Similar measures are in place in West Virginia and Ohio.) Though these states' actions are a far cry from the national reform physicians and insurers desire, it is a start in a definitive—if not right—direction.

Hot hospitals

In 2005, \$616 billion was spent on care in hospitals. Growing demand for hospital services, along with higher rates from private insurers, have led to an increase in capital expended in this area. Among the approximately 6,100 hospitals in the U.S., a few tower over the rest. Each year, *U.S. News & World Report* publishes a ranking of the nation's top hospitals, surveying doctors around the country about hospitals' reputations in 17 medical specialties as well as other factors like staffing, morbidity rates and technology. In 2006, the magazine's list named Baltimore's Johns Hopkins Hospital No. 1 overall—a position the institution has held for 16 years running. The Mayo Clinic came in second, followed by the Cleveland Clinic and Massachusetts General.

In 2005, the government launched www.hospitalcompare.hhs.gov, which compares nearly 4,200 hospitals that volunteered data in 17 different areas related to heart attacks, heart failure and pneumonia in an effort to help physicians and patients see how hospitals nationwide compare in terms of quality of care. Federal officials plan to use the site as a model for future efforts to publicize hospital results and assess Medicare participants, which they hope will lead to quality improvements within practices.

The Fall of the House of Tenet

Tenet Healthcare, the nation's second-largest hospital chain, provides a cautionary tale about the perils of doing business in the health care industry. The company, with 98 acute care hospitals and numerous other facilities nationwide, has been the subject of federal investigations into the way it handled Medicare payments over the last few years. Charles Grassley, chair of the Senate Finance Committee, has said that Tenet "appears to be a corporation that is ethically and morally bankrupt." In May 2003, beleaguered CEO Jeffrey Barbakow stepped down after 10 years of heading the firm. The company paid a record settlement amount of \$375 million in 1994 for alleged kickbacks and bribes to doctors as inducements to refer patients to its psychiatric hospitals. Tenet made headlines again 10 years later as it began talking to the feds about a possible \$1 billion settlement to end an investigation into charges it performed unnecessary heart surgeries on patients. In August 2006, Tenet agreed to settle with the DOJ for \$725 million, as well as \$175 million in Medicare payments.

Another headline-grabbing health care scandal involves HealthSouth, the nation's largest provider of physical rehab, outpatient surgery and diagnostic services. In 2003, the Securities and Exchange Commission hit the company with charges of cooking the books, accusing the company and its founder and CEO, Richard Scrushy, of overstating earnings by \$1.4 billion since 1999. While Scrushy got off scot-free, his former CFO, Aaron Beam, was sentenced to three months in prison and \$285,000 in fines. In July 2006, another higher-up in the company, Weston Smith, was fined \$7 million and sentenced to over 2 years in prison for his involvement in securities law violations. Word on the street is that the company will soon spin off its outpatient rehabilitation and surgery units.

The dreaded “home”

The term “nursing home” strikes fear in the hearts of many Americans, largely due to media reports detailing abuse and unsanitary conditions at many facilities (but also because of consumers’ first-hand experiences with these institutions.) The nation’s nursing homes—also sometimes called “skilled nursing facilities” (SNFs) or “long-term care facilities”—have traveled a rocky road in recent years. Indeed, their crisis helps illustrate larger trends in the health care industry as a whole, particularly among providers that, like nursing homes, rely heavily on federal and state dollars to reimburse them for the cost of patient care. By 2001, nine of the top nursing home corporations in the country, including top names like Genesis Health Ventures, Kindred Healthcare, Sun Healthcare Systems and Mariner Post-Acute Networks, had gone through bankruptcy court, saddled with hundreds of millions in debt.

What brought these billion-dollar companies to this low point, when they have such a steady stream of consumers desperate for their services? For one thing, many long-term care facilities overextended their debt burdens in the 1990s, investing in rehab facilities and other ancillary services that promised big (some would say inflated) paybacks from Medicare. Then Medicare struck back, as Congress passed the Balanced Budget Act of 1997, which, among other things, sought to reduce federal health care spending by instituting entirely new payment systems for major health entities like nursing homes, home care agencies, hospitals and doctors. Under the old system, providers were basically paid a fixed amount, or fee, for each service they provided to Medicare patients. Fair enough, but patient advocates and Congress began to worry that nursing home clients were receiving a bit too much care—excessive and unnecessary therapy services, for instance—simply because facilities could make more money by providing and charging the feds for it. Under the BBA, Congress mandated a new “prospective payment system” (PPS) that set up strict guidelines for how long-term care facilities were to be reimbursed for care provided to Medicare and Medicaid patients. Under PPS, facilities are basically paid a fixed per diem for a patient’s care depending on the severity of her needs (or “acuity level”), which is determined using a host of intricate rules. The system also set certain limits, or “caps,” on services such as rehab, under which Medicare would only pay a fixed amount per patient annually.

The combination of leftover debt and poor financial management, plummeting federal dollars and skyrocketing liability insurance due to high-profile malpractice judgments—plus a host of other factors like low staffing due to undesirable working conditions and a higher acuity level among the patient population—sent, by some estimates, at least 10 percent of the nursing home industry into Chapter 11 by 2001. Most of the nursing home giants have recovered and are learning to adjust to the new payment system, but the situation provided a valuable lesson to other health care providers, like rehab hospitals, whose new Medicare PPS systems took effect after the long-term care revamp had done its damage. Congress, acknowledging that it may have been a bit enthusiastic with the red ink, also kicked in some million-dollar concessions to boost reimbursements after intense industry lobbying.

Others, however, weren’t so lucky: many providers of those once high-paying ancillary services, like physical therapy, were forced to close their doors in the aftermath of PPS. Home health care providers, also highly dependent on Medicare and Medicaid payments, weathered a similar crisis under their own new payment system—and, like their counterparts, managed to eke out some financial givebacks from Congress during the past few years.

CDHC—the new wave of care?

One plan for health care that has generated a buzz in the Bush administration is the idea of “consumer-driven health care,” or CDHC. The idea is simple: if consumers can control their own health care spending, providers and insurers will be forced to compete for business, thus (hopefully) increasing quality of care while driving down costs. At the crux of CDHC are health savings accounts (HSAs), or tax-free accounts offered along with low-cost, high-deductible insurance plans. Either employee or employer (or both) stow away a certain amount of money in the HSA each year, which consumers can spend on virtually any health treatment or medication they want; whatever is unused remains in the account for any future health-related expenses.

Early forms of CDHC have shown up in a number of employer health care plans, including Sara Lee and Aetna, and benefits consultancy Mercer expects 73 percent of companies to add HSAs to their benefits offerings by 2006. Advocates for CDHC plans use the example of cosmetic surgery: since consumers must pay for procedures completely out of pocket, they almost always find the best care at the lowest price. Since 1998, the average price of a tummy tuck has risen 19 percent, only slightly higher than inflation, and far below the 49 percent rise in per capita spending on health care for the same period. Opponents of the plan suggest that employers will use CDHC as a cover to drive up health care costs, further the divide between the quality of care received by the rich and the poor. What CDHC plans do not take into account is that the bulk of the cost of health care spending is not from overconsumption of medical care by people who can afford it, but rather from treating people with chronic conditions such as diabetes, which require thousands of dollars per year to manage.

Becoming the biggest

According to Philip Pfrang, the national director of Life Sciences and Health Care at Deloitte & Touche's Mergers & Acquisition Services practice, M&A activity among managed care companies is alive and well as regional firms try to expand their brands to reach more U.S. workers both at home and abroad. Pfrang likens the managed care sector of health care to the pharmaceutical business, which has seen a select few companies emerge as large organizations through acquisitions. The hospital sector has also seen its fair share of venture/mergers recently, as competitive pressures in the industry increase.

WellPoint, today's largest leading health plan, gained its No. 1 ranking through a 2004 merger with Anthem worth \$16.4 billion. Humana, the third-largest HMO in the nation, nearly became the top provider back in 1998, but failed to complete a merger with UnitedHealth, which chose instead to grow through its own acquisitions, including the 2002 purchase of AmeriChoice and the 2003 buyout of Mid-Atlantic Medical Services, worth \$2.95 billion. One merger that proved to be a huge success was the 1997 combination of Beckman Instruments and the Coulter Corporation. The resulting company, Beckman Coulter, is currently one of the world's largest providers of instrument systems and products for laboratory work. Additionally, Coventry Health Care, among the largest HMO providers nationwide, was formed in 1998 through Coventry Corporation's acquisition of the Principal Financial Group's health care unit.

Sometimes, in the health care industry, reinvention can be an equally powerful tool to gaining market share. A number of the top companies in health care today survived bankruptcy scandals during the 1990s and re-emerged as successful businesses. Kindred, one of the nation's largest health care providers, was formerly Vencor; Caremark Rx, one of the nation's largest pharmaceutical services providers, used to be a division of the now-defunct MedPartners; and DaVita, the country's largest independent provider of dialysis services, was once Total Renal Care Holdings.

Other top companies in health care today include Cardinal Health, one of the largest wholesalers of pharmaceutical products and surgical supplies; HCA, one of the largest hospital operators in the U.S.; and Medtronic, one of the world's leading medical technology companies. More recent merger activity in the sector includes Boston Scientific's 2006 acquisition of Guidant, a medical devices manufacturer. As part of the deal, Guidant's vascular and endovascular divisions were spun off to Abbott Laboratories.

Where the jobs are

In spite of its daunting complexity, the health care industry has one big upside: it's a reliable producer of jobs. The health services industry, the largest of all industries in 2004, as categorized by the Bureau of Labor Statistics (BLS), employed nearly 13 million people that year. Of the 20 occupations the BLS projects to grow the fastest in coming years, eight are in health services. Furthermore, of new jobs that will be created by 2014, about 19 percent, or some 3.6 million, will be in health services, more than in any other industry. The Labor Department predicts an increase of 22.2 percent in nursing jobs by 2014, while physician's assistant jobs will grow by 54 percent, occupational therapist positions by 33 percent and home care opportunities by 66 percent. Fitness trainers and dental hygienists are also expected to be popular professions.

While the suggestion of working in the health care industry may conjure visions of crushing med school debt and grueling internships, in fact the majority of jobs in the sector require less than four years of college education. Graduates of one- and two-year certification programs, for example, can work as medical records and health information technicians. Service occupations abound, including medical and dental assistants, nursing and home health aides and facility cleaning jobs. The BLS predicts particularly strong growth in jobs outside of the inpatient hospital sector, such as medical assistants and home health aides. There is a constant clamor for more nurses, too, as facilities face growing regulatory pressure to meet mandatory staffing levels.

MBAs in Health Care

What is health care management?

Health care management, also known as health care administration encompasses a wide range of jobs in a variety of organizations. Health care managers are involved in the delivery of health care and the development of public policy regarding financing of and access to care. It is a field that has evolved over the last 50 years and continues to evolve as the health care delivery system changes. Health care managers work for organizations and individuals that we encounter on a daily basis from physician groups to hospitals, insurance companies and government agencies. Their roles are diverse as well ranging from line supervisors to directors and middle managers to executives.

As the health care field has grown so have the number of disciplines that health care managers oversee. In addition to expanding clinical areas requiring managers such as imaging centers, ambulatory surgery centers, home care, occupational health, assisted living and adult day care to name a few, disciplines in need of professional management have developed. These include specialists in the realm of financial management, reimbursement, revenue cycle management, planning, fundraising and development, performance improvement, medical management and business development.

The health care field has been cited as one of the most rapidly growing in the United States today. An aging population, longer life expectancy and new technology, treatments and medication are major contributors to this growth. As such, the need for health care professionals including managers at all levels will increase. The roles and responsibilities of health care managers may change as the health care system continues to do so. However one objective, which is the primary objective of management will remain constant: "designing and maintaining an environment within an enterprise in which individuals working together in groups can accomplish selected missions and objectives" (Wehrich and Koontz).

Who are health care managers and what do they do?

Health care managers come from a large number of professions. In addition to those who graduate from programs in health care administration, public administration or business administration there are clinical managers, financial managers, information systems managers, and public relations and marketing managers. Individuals with undergraduate or graduate degrees in management generally enter the field after the completion of their training with the goal of obtaining a middle management or upper level management position in a health care organization. Managers in professions such as finance, often have worked in another field, have developed their skills and transfer these skills to the health care environment. Clinical managers including nurses and physicians may work as clinicians for a period of time before entering management.

The organizations in which health care managers work include those that provide direct patient care and those that support the provision of care and services. Along what is referred to as the continuum of care, organizations provide different levels of direct care.

The highest level of care is provided in acute care hospitals. Hospitals are large complex organizations with hundreds or even thousands of employees and dozens or hundreds of supervisory and management personnel. Hospitals may be free

standing or part of a health system. They are classified according to ownership and control, number of beds, by the levels and types of services they provide and whether they have physician training programs, research programs and academic affiliations.

The next level of care on the continuum is called long term acute care (LTAC). These are hospitals either free-standing or units within an acute care hospital that provide care to patients with chronic conditions. This is a relatively new level of care that is in a growth mode as units and facilities open throughout the country.

Sub acute care is provided in hospital and nursing homes. Hospital units are often referred to as transitional care units in which patients receive intense rehabilitation. Nursing homes operate sub acute or short term units in which patients discharged from the hospital receive rehabilitation and other clinical services.

Nursing homes or skilled nursing facilities provide care to the elderly and disabled and others requiring long term care. Nursing homes may be freestanding, part of a regional or national company or hospital based.

Assisted living facilities provide a lower level of care than nursing homes. These facilities are generally for elderly residents who are unable to live on their own who require supervision and assistance with activities of daily living.

Adult day care programs may be a medical model or social model. These programs provide socialization and medical services in the case of the medical model to elderly individuals who live in the community.

Other levels of care include home health care and ambulatory care. These services are provided by a variety of organizations and individuals including hospitals, physicians, nurses, therapists and technologists.

Organizations that support the provision of care may be classified into the following categories:

- Managed care organizations and insurance companies
- Management services organizations
- Consulting firms
- Public health and community health organizations
- Health care information services organizations
- Health related companies
- Research organizations, associations and educational institutions
- Regulatory and government agencies

Each of these entities plays a role in the delivery, financing and regulation of health care services. Managers in these organizations may have worked for a direct care provider previously or in another field.

These organizations and both direct care providers and support roles will be discussed in greater detail in chapter of this guide.

As in any organization there are different levels of management in health care. Entry level management positions are generally referred to as a line supervisor. This type of individual supervises the day to day activities of a group of employees. Examples of this type of position are a chemistry lab supervisor in a hospital, a nursing supervisor in a nursing home, a food services supervisor in an assisted living facility and a case management supervisor in a managed care company. Many of these individuals are trained in a clinical or technical field and have come up through the ranks.

The next management level is department manager, or department head. These individuals are responsible for an entire department in a hospital, nursing home or other health care organization. An environmental services manager in a nursing home, a health information management (also known as medical records) department head in a hospital, and a project manager in a consulting firm are all at this management level. Many of these individuals have formal management training (a Bachelor's or Master's degree or other training program) and/or certification in their specific discipline.

The level above department manager is often called director although some organizations refer to their managers as directors. Director usually implies the management of a broad function in the company such as Director of Public Relations or Director of Staff Development. Managers in these roles may have clinical or technical experience, management training and specific training and certification in their area of expertise. In health care systems with corporate structures the director title is utilized for individuals with corporate or system wide responsibility for a function such as the Director of Materials Management or the Director of Managed Care.

There are physicians in management roles as well. These include the head of a clinical department in a hospital (medicine, surgery, obstetrics), the head of a clinical section in a large hospital (e.g. cardiology, urology) and various positions that are administrative in nature. The administrative type roles include medical director, chief medical officer, director of performance improvement, director of clinical effectiveness and medical director of a managed care organization. Many of these physician executives obtain management degrees and attend management training courses.

There are several designations for the executive level management in health care organizations. One title sequence uses administrator to signify the highest management level. In this scheme there are associate administrators and assistant administrators. In hospitals and nursing homes that utilize these titles, the administrator is the highest ranking executive responsible for the entire organization. Associate administrators and assistant administrators report to this individual and are responsible for multiple departments and/ or large functional areas. A common variation of this structure is the president and chief executive officer, executive and senior vice presidents and vice presidents. For the most part the roles and responsibilities of these individuals correspond to the first set of titles. Another set of titles utilizes executive director to signify the top person and associate and assistant executive director for the top managers reporting to this individual. Those who hold these positions may have worked their way up through the management ranks and almost always have graduate degrees in health care management, business administration or a similar discipline.

In health systems and academic medical centers there is also a corporate management level. These executives have system responsibilities for multiple facilities and usually have the title corporate director or vice president. There is also a corporate president or chief executive officer and a corporate chief financial officer. These companies may be regional, national or international and either for profit or not for profit. They may be comprised of one type of health care facility, such as a nursing home or many types such as hospitals, physician practices and insurance companies.

In the academic setting there are often deans and university vice presidents who are have overall responsibilities for the hospitals and other health care facilities in the organization. The health care executives at the hospital or health care facilities report to these individuals.

A number of other roles and titles exist in both direct care and non direct care health care from directors and coordinators in performance improvement organizations to managers in home health care agencies and supervisors in public health agencies. All of these management roles will be reviewed in chapter .

There are numerous functional areas in which health care managers work. These include strategic planning, day to day operations, finance, business development, information services, marketing, planning, human resources and performance improvement. At one time health care executives were for the most part generalists with knowledge and experienced in all or most of these areas. As the field and organizations became more complex, specialists in these areas and others emerged. Today although the chief executive officer of a health care organization has a general understanding of these functional areas she is supported by experts with education, training and in depth knowledge of their respective disciplines.

New health care management roles developed with the growth of managed care and health systems. Managed care executives, managers of physician practices, preferred provider organizations (PPOs), physician hospital organizations, ambulatory surgery centers, imaging centers, and joint ventures appeared on the scene. In response to the increase in law suits and legal issues, risk managers, in house attorneys and insurance manager roles were introduced. In the area of finance, revenue cycle managers and consultants responded to the complexities of government and managed care reimbursement for

services. With the growth of government and accrediting agency regulations, government relations and regulatory affairs professionals emerged. Pressure to control cost and resource consumption prompted the introduction of medical management and disease management.

New roles and positions continue to evolve. Administrators and managers for organizational effectiveness, and managers of clinical effectiveness are two examples.

There is good reason to believe that as the health care system continues to evolve, new roles for managers will be created. These positions may be in areas of outcomes management, health education, information systems and ambulatory services. Alternatives to institutional long term care will also have an impact. New models for the provision of care to the growing elderly population are being developed and tested.

Government policy and regulation will play a major role in shaping new management positions. All of these factors contribute to field that is expected to expand and diversify for years to come.

Health Care Consulting

Once you land a job in the health care consulting, what you can expect depends largely on the type of firm you choose. Graduate degree holders with health care-related degrees or those who have substantial experience in the health care industry prior to attending graduate school are usually pegged early in the recruiting process to the firm's health care industry practice.

New hires at larger firms are more likely to have a standardized, predictable experience compared to their counterparts at smaller firms without formal internal processes for allocating work. But a "can-do" attitude regardless of the nature or size of the task is rewarded at all firms.

Kinder and gentler

The organizational motivation of most consulting firms includes an unspoken irony—each project implies a strong commitment to a client's interests without any guarantees of a long-term relationship or of any follow-up beyond the project's contractual boundary. In this environment the motivations of consultants stem largely from the project's intellectual challenges. While consultants often "believe" in what they are trying to accomplish for a client on a project, their visceral rise results from the application of intellectual muscle to complex questions.

Government involvement in regulating and purchasing health care reflects public opinion that health care is a social good that government should work to preserve. Even private health care market participants (and their consultants) tend to have a more humanitarian orientation compared to other industries that are more exclusively concerned with "bottom-line" issues. On the other hand, bottom-line issues are still the focus as the government looks to control public spending on health care and publicly traded technology providers and managed care organizations seek profit-increasing efficiencies. All in all, health care consultants are expected to have the same skill set as all other consultants, but may be seen as "kinder and gentler" than their counterparts consulting in other industries.

Health Care Employer Directory

Roche Diagnostics

9115 Hague Road
 Indianapolis, Indiana 462520
www.roche.com
careers.ind.roche.com



Roche Diagnostics is the world's leading provider of diagnostic systems and decision-oriented health information. We are dedicated to the discovery, development, manufacturing, marketing and servicing of products and solutions for medical laboratories, physicians and patients, as well as for research and industry. Roche Diagnostics is a diverse, inclusive company that seeks, celebrates and leverages diversity to maximize the competitive advantage of people. We offer a variety of opportunities at our U.S. diagnostics marketing and sales headquarters in Indiana and at our global molecular business area headquarters in California.

Business schools Roche Diagnostics recruits from

University of Chicago; Northwestern (Kellogg); Indiana University (Kelley); Harvard Business School, Duke University (Fuqua); U.C.L.A.; University of Michigan; Purdue University; MIT (Sloan); University of Pennsylvania (Wharton); Yale University, Stanford University; UC Berkeley (Haas); Washington University (Olin)

Aetna Inc.

151 Farmington Ave.
 Hartford, CT 06156
 Phone: (860) 273-0123
 Fax: (860) 273-3971
 Toll Free: (800) 872-3862
www.aetna.com

Amerigroup Corporation

4425 Corporation Lane
 Virginia Beach, VA 23462
 Phone: (757) 490-6900
 Fax: (757) 490-7152
www.amerigrp.com

Applera Corporation

301 Merritt 7
 Norwalk, CT 06851-1070
 Phone: (203) 840-2000
 Fax: (203) 840-2312
www.applera.com

Beckman Coulter, Inc.

4300 N. Harbor Blvd.
 Fullerton, CA 92834-3100
 Phone: (714) 871-4848
 Fax: (714) 773-8283
www.beckman.com

Beverly Healthcare

1000 Beverly Way
 Fort Smith, AR 72919
 Phone: (479) 201-2000
 Fax: (479) 201-1101
www.beverlyhealthcare.com

Boston Scientific Corporation

1 Boston Scientific Place
 Natick, MA 01760-1537
 Phone: (508) 650-8000
 Fax: (508) 647-2393
www.bostonscientific.com

Caremark Rx, Inc.

211 Commerce Street, Suite 800
 Nashville, TN 37201
 Phone: (615) 743-6600
 Fax: (205) 733-9780
www.caremark.com

CIGNA

1 Liberty Place
 Philadelphia, PA 19192-1550
 Phone: (215) 761-1000
 Fax: (215) 761-5515
www.cigna.com

Community Health Systems, Inc.

155 Franklin Road, Ste. 400
 Brentwood, TN 37027-4600
 Phone: (615) 373-9600
 Fax: (615) 371-1068
www.chs.net

Coventry Health Care, Inc.

6705 Rockledge Drive
 Suite 900
 Bethesda, MD 20817
 Phone: (301) 581-0600
 Fax: (301) 493-0731
www.cvty.com

DaVita, Inc.

601 Hawaii Street
 El Segundo, CA 90245
 Phone: (310) 536-2400
 Fax: (310) 536-2675
www.davita.com

Express Scripts, Inc.

13900 Riverport Drive
 Maryland Heights, MO 63043
 Phone: (314) 770-1666
 Fax: (314) 702-7037
www.express-scripts.com

Health Care Employer Directory, cont.

Fresenius Medical Care AG

Else-Kröner-Straße 1
61346 Bad Homburg, Germany
Phone: +49-6172-608-0
Fax: +49-6172-608-2488
www.fmc-ag.com

Guidant Corporation

111 Monument Circle, 29th Floor
Indianapolis, IN 46204
Phone: (317) 971-2000
Fax: (317) 971-2040
www.guidant.com

HCA, Inc.

1 Park Plaza
Nashville, TN 37203
Phone: (615) 344-9551
Fax: (615) 344-2266
www.hcahealthcare.com

Health Management Associates, Inc.

5811 Pelican Bay Blvd., Suite 500
Naples, FL 34108-2710
Phone: (239) 598-3131
Fax: (239) 598-2705
www.hma-corp.com

Health Net, Inc.

21650 Oxnard Street
Woodland Hills, CA 91367
Phone: (818) 676-6000
Fax: (818) 676-8591
www.healthnet.com

HealthSouth Corporation

1 HealthSouth Pkwy.
Birmingham, AL 35243
Phone: (205) 967-7116
Fax: (205) 969-6889
www.healthsouth.com

Hillenbrand Industries, Inc.

700 State Route 46 East
Batesville, IN 47006-8835
Phone: (812) 934-7000
Fax: (812) 934-7371
www.hillenbrand.com

Humana Inc.

The Humana Building
500 W. Main Street
Louisville, KY 40202
Phone: (502) 580-1000
Fax: (502) 580-3677
www.humana.com

Kaiser Permanente

1 Kaiser Plaza, Suite 2600
Oakland, CA 94612-3673
Phone: (510) 271-5800
Fax: (510) 267-7524
www.kaiserpermanente.org

Kindred Health Care

680 S. 4th Street
Louisville, KY 40202-2412
Phone: (502) 596-7300
Fax: (502) 596-4170
www.kindredhealthcare.com

Laboratory Corporation of America

358 S. Main Street
Burlington, NC 27215
Phone: (336) 229-1127
Fax: (336) 436-1205
www.labcorp.com

Magellan Health Services, Inc.

16 Munson Road
Farmington, CT 06032
Phone: (860) 507-1900
Fax: (410) 953-5200
www.magellanhealth.com

Manor Care, Inc.

333 N. Summit Street
Toledo, OH 43604-2617
Phone: (419) 252-5500
Fax: (419) 252-5596
www.hcr-manorcare.com

Mariner Health Care, Inc.

1 Ravinia Dr., Ste. 1500
Atlanta, GA 30346
Phone: (678) 443-7000
Fax: (770) 393-8054
www.marinerhealth.com

Medco Health Solutions

100 Parsons Pond Drive
Franklin Lakes, NJ 07417-2604
Phone: (201) 269-3400
Fax: (201) 269-1109
www.medco.com

Medical Mutual of Ohio

2060 E. 9th Street
Cleveland, OH 44115-1300
Phone: (216) 687-7000
Fax: (216) 687-6044
www.mmmoh.com

Medtronic, Inc.

710 Medtronic Pkwy. NE
Minneapolis, MN 55432-5604
Phone: (763) 514-4000
Fax: (763) 514-4879
www.medtronic.com

NeighborCare, Inc.

601 East Pratt Street, 3rd Floor
Baltimore, MD 21202
Phone: (410) 528-7300
Fax: (410) 528-7473
www.neighborcare.com

PaciFiCare Life and Health Insurance Company

5995 Plaza Drive
Cypress, CA 90630
Phone: (714) 952-1121
Fax: (714) 226-3581
www.pacificare.com

Quest Diagnostics Incorporated

1 Malcolm Avenue
Teterboro, NJ 07608
Phone: (201) 393-5000
Fax: (201) 462-4715
www.questdiagnostics.com

Sierra Health Services, Inc.

2724 N. Tenaya Way
Las Vegas, NV 89128
Phone: (702) 242-7000
Fax: (702) 242-9711
www.sierrahealth.com

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St. Jude Medical, Inc.

1 Lillehei Plaza
St. Paul, MN 55117-9983
Phone: (651) 483-2000
Fax: (651) 482-8318
www.sjm.com

Tenet Healthcare

13737 Noel Road
Dallas, TX 75240
Phone: (469) 893-2200
Fax: (469) 893-8600
www.tenethealth.com

WellChoice, Inc.

11 W. 42nd Street
New York, NY 10036
Phone: (212) 476-7800
Fax: (212) 476-1281
www.wellchoice.com

Stryke Corporation

2725 Fairfield Road
Kalamazoo, MI 49002
Phone: (269) 385-2600
Fax: (269) 385-1062
www.strykercorp.com

UnitedHealth Group Inc.

UnitedHealth Group Center
9900 Bren Road East
Minnetonka, MN 55343
Phone: (952) 936-1300
Fax: (952) 936-7430
www.unitedhealthgroup.com

WellPoint, Inc.

120 Monument Circle
Indianapolis, IN 46204
Phone: (317) 488-6000
Fax: (317) 488-6028
www.wellpoint.com

Sun Healthcare Group, Inc.

18831 Von Karman, Ste. 400
Irvine, CA 92612
Phone: (949) 255-7100
Fax: (949) 255-7054
www.sunh.com

Universal Health Services

Universal Corporate Center
367 S. Gulph Road
King of Prussia, PA 19406-0958
Phone: (610) 768-3300
Fax: (610) 768-3336
www.uhsinc.com

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Hedge Funds

What is a Hedge Fund?

In a recent article by *The Wall Street Journal*, Tremont Advisors reported that hedge funds took in approximately \$72.2 billion in assets in 2003 and that worldwide hedge fund investment is now as high as \$750 billion in assets.

Hedge funds are considered an “alternative investment” vehicle. The term “alternative investment” is the general term under which unregulated funds operate; this includes private equity and real estate funds. The total “alternative” category (would include private equity and real estate) is not covered within the scope of this section but it is useful to know that often people refer to hedge funds as alternative investments. Mainstream funds are investment funds that everyday investors can purchase, mutual funds are the prime example of a mainstream fund.

Over the past decade, hedge funds have grown tremendously in terms of assets under management and also garnered a lot of media attention. Although, despite their growth and popularity, hedge funds still remain a mystery to many people who do not understand exactly what they are and how they work. So what exactly is a hedge fund?

A Concise Definition of “Hedge Fund”

A ‘private unregistered investment pool’ encompassing all types of investment funds, companies and private partnerships that can use a variety of investment techniques such as borrowing money through leverage, selling short, derivatives for directional investing and options.

During the early years of the hedge fund industry (1950s to 1970s), the term ‘hedge fund’ was used to describe the ‘hedging’ strategy used by managers at the time. “Hedging” refers to the hedge fund manager making additional trades in an attempt to counterbalance any risk involved with the existing positions in the portfolio. Hedging can be accomplished in many different ways but the most basic technique is to purchase a long position and a secondary short position in a similar security. This is used to offset price fluctuations and is an effective way of neutralizing the effects of market conditions.

Today, the term ‘hedge fund’ tells an investor nothing about the underlying investment activities, similar to the term “mutual fund.” So how do you figure out what the hedge fund manager does? You are able to figure out a little more about the underlying investment activities by understanding the trading/investment strategies that the hedge fund manager states he trades. The “investment strategy” is the investment approach or the techniques used by the hedge fund manager to have positive returns on the investments. If a manager says he trades long/short equity then you know he is buying undervalued equities and selling overvalued equities. Although this description is the long/short equity strategy at its most basic, it is important to understand the strategies that the manager says he employs. For more information on specific hedge fund investment strategies, see the *Vault Career Guide to Hedge Funds*.

Distinguishing Characteristics

So now that you have reviewed some of the basic terminology in the industry, we will explain the key points in depth. The main distinguishing characteristics of hedge funds are the following:

- Hedge funds can “hedge” their portfolio
- Hedge funds use derivatives
- Hedge funds can short sell
- Hedge funds have the ability to use leverage.

These characteristics make hedge funds different from most other investment funds, especially mutual funds. To get a good understanding of how a hedge fund manager operates, it is very important to understand these concepts. The four concepts are now defined in detail:

Hedging

Hedging refers to the execution of additional trades by the hedge fund manager in an attempt to counterbalance any risk involved with the existing positions in the portfolio. Hedging can be accomplished in many different ways, although the most basic technique is to purchase a long position and a secondary short position in a similar security (See Gap example). This is used to offset price fluctuations and is an effective way of neutralizing the effects of market conditions.

Hedging Example

Courtney is a hedge fund manager who invested in the Gap stores. Here we will see how he hedges his risk. Courtney is ‘long’ (he’s bought) 100 shares of Gap Stores but he now believes the retail industry may be vulnerable to a down turn in the market. He wants to hedge this risk and does this by going “short” (selling) Abercrombie & Fitch, which is in the same retail industry.

Q. What would happen if the retail industry did poorly?

A. The share prices of both Gap and Abercrombie & Fitch might decline.

Q. How would this affect any money Courtney makes?

A. Since Courtney is long on Gap (he owns it) he would lose money on this trade. Since Courtney is also short (he has already sold it) Abercrombie & Fitch, he would make money on that trade. Therefore he can offset some of his losses from Gap with gains from Abercrombie & Fitch. He reduces his risk of Gap by hedging with Abercrombie & Fitch.

Q. When you say Courtney gains from the Abercrombie & Fitch trade, what does this mean?

A. When Courtney goes short A&F it means he has sold it before he owns it. So say he sold 100 A&F shares short for \$50 each. He receives \$5,000 cash for doing so. This transaction is conducted through his broker and he now owes 100 A&F shares to his broker, to be paid back at some time in the future. As time goes by the retail industry does poorly and the share price of A&F falls to \$40.

Q. If the stock price of A&F falls to \$40, what does this mean for Courtney’s profits?

A. Since Courtney owes 100 A&F shares to his broker he can now go out and buy the 100 shares for \$40 each, costing him a total of \$4,000. Therefore Courtney has made \$1,000 profit. (He received \$5,000 from the original short sale and then paid \$4,000 to buy A&F, so his profit is \$1,000)

Derivatives

Derivatives that are used by hedge funds can take on many forms, and the more complex derivatives (interest rate swaps, foreign currency swaps, contract for differences, total return swaps, etc.) are not covered in this book. Discussed now are the most basic forms of derivatives: ‘put’ and “call” options on stocks:

Option Definitions

Put option

A ‘put’ option gives the holder the right to sell the underlying stock at a specified price (strike price) on or before a given date (exercise date).

Call option

A ‘call’ option gives the holder the right to buy the underlying stock at specified price (strike price) on or before a given date (exercise date).

Option writer

The seller of these options is referred to as the “writer”—many hedge funds will often write options in accordance with their strategies. This is the person who originates an option contract by promising to perform a certain obligation in return for the price or premium of the option. Any investor can sell options (write options) provided they have answered an options questionnaire provided to them by their broker. This would determine the knowledge of the investor and whether they understand the risks associated with writing options.

How does a hedge fund manager use options to reduce risk?

Consider Kristin, a long/short hedge fund manager, who in January 2004 owns 1,000 Wal-Mart shares. The current share price is \$73 per share. Kristin is concerned about developments in Wal-Mart’s illegal immigrant lawsuit that may cause the share price to decline sharply in the next two months and wants to protect herself from this risk. The process that Kristin would go through to hedge the risk of Wal-Mart’s share price falling would be:

- Kristin could buy 10 July ‘put’ options with a strike price of \$65 on the Chicago Board Options Exchange (www.cboe.com).
- This ‘put’ option gives Kristin the right to sell 1,000 shares for \$65 per share at any time before it expires in July. If the market price of Wal-Mart falls below \$65, the options can be exercised so that Kristin received \$65,000 for the entire holding. When the cost of the options is taken into account, the amount realized is \$62,500.
- If the quoted option price is \$2.50, each option contract would cost \$250. Since each option contract is valued per 100 shares, the total cost of the hedging strategy would be $10 * \$250 = \$2,500$.
- Although this strategy costs \$2,500, it guarantees that the shares can be sold for at least \$65 per share for the life of the option (it expires in July).
- But if the market price stays above \$65, the options are not exercised because Kristin can make more money by just selling the shares for market price.

The Chicago Board Options Exchange (CBOE)

The CBOE created an orderly market with well-defined contracts on 16 stocks when it began trading call option contracts in 1973. The exchange began trading put options in 1977. The CBOE now trades options on over 1,200 stocks and many different stock indices. Many other exchanges throughout the world also trade option contracts. To learn more, visit the exchange's web site at www.cboe.com.

Short selling (going "short")

Short selling involves the selling of a security that the seller does not own. Short sellers believe that the stock price will fall and that they will be able to repurchase the stock at a lower price in the future. Thus, they will profit from selling the stock at a higher price, then buy it in the future at a lower price. (The opposite of going "short" is going "long," when investors buy stocks they believe will rise.)

Short Selling Example

Jimmy believes that McDonalds is overvalued and that he can profit by selling short "MCD." Jimmy sells short 100 shares at \$50 which means he has sold stock that he does not yet own, this is a stock loan. In the future he has to buy the stock to repay the stock loan he entered into when shorting the stock. But, McDonald's price continues to rise to \$75, this means that in order to buy the stock (this is called "covering" his stock loan), Jimmy pays \$75 per share which results in him losing \$2,500 (100 * \$25)

Before Jimmy enters into the short sale, he must ensure that he is able to borrow the stock (get a stock loan), usually through its prime broker. Jimmy will call the stock loan department of the prime broker to see if the prime broker has the stock available to lend to him. If the stock loan department has the stock to lend, then Jimmy can short sell the stock (borrowing it from the prime broker). If the stock is not available for borrow, Jimmy cannot sell short the security.

Leverage

Leverage measures the amount of assets being borrowed for each investment dollar. Leverage (borrowing additional funds) is utilized by hedge fund managers when they believe that the cost of the borrowed funds will be minimal compared to the returns of a particular position. It can be a key component to hedge fund management since it gives the hedge fund managers the ability to have higher returns (and potentially lose more) with borrowed funds.

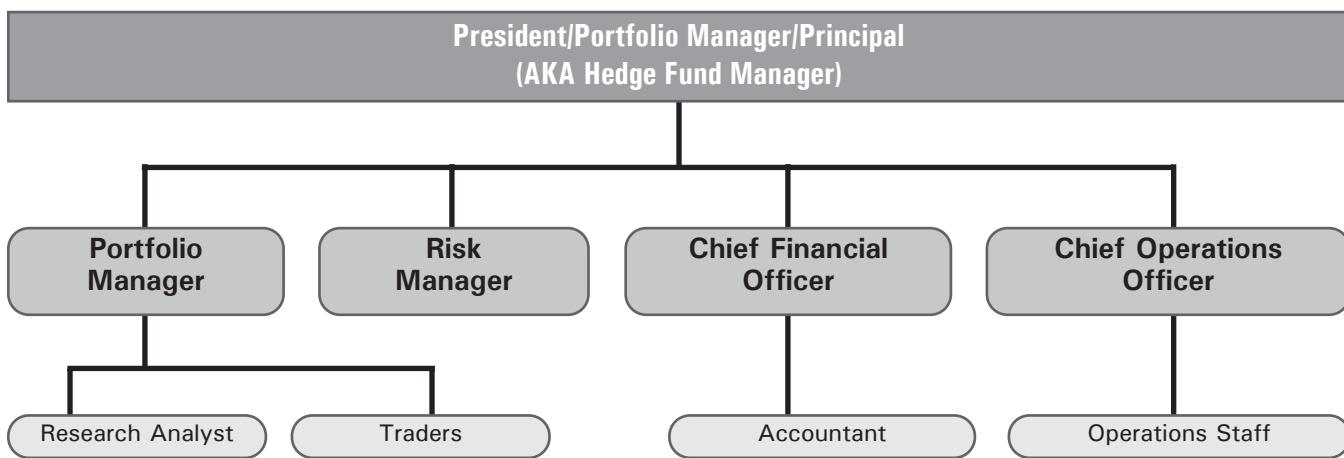
Typical hedge fund leverage depends on the type of financial instruments that the hedge fund trades. Fixed income has lower risk levels so it is not uncommon to have four or five times the value of the fund borrowed. Equities have a higher risk profile and therefore typical leverage is one and a half to two times the value of the fund. However hedge funds are usually comprised of long and short positions, so a large market rise or fall has little impact if their profitable positions were equally balanced by their losing positions.

The simplest examples in everyday life of leverage are house mortgages and car loans. The bank manager uses the house or the car as collateral for the loan from the bank. The bank manager can then sell the house or the car if you default on your loan. Similarly, the hedge fund manager uses the financial instruments in his account as collateral for the funds they have borrowed from their bank (prime broker). The primary sources of leverage are financial institutions and banks. If the hedge fund manager cannot pay the loan back, the financial institution can then sell the collateral (the financial instruments in the account) to pay back the loan.

Leverage Calculation Example

If the hedge fund has \$1 million of invested money and is borrowing another \$2 million, to bring the total dollars invested to \$3 million, then the leverage used is 200 percent. The amount of leverage typically used by the fund is shown as a percentage of the fund.

Organizational Structure of a Typical Hedge Fund



So what exactly are hedge fund managers and what do they do? A hedge fund manager is normally the founder and the key person in charge of overseeing the whole operation of the hedge fund. This means that he/she is responsible for overseeing the portfolio, often making trading decisions, hiring personnel, monitoring the risk of the portfolio and ensuring that the accounting and operations departments are in order. The hedge fund manager is often referred to as the principal or president and can often also be called the portfolio manager.

Hedge funds vary in size from assets under management from as little as \$1 million to over \$10 billion. Unlike a typical investment bank, the roles of the employees at hedge funds are not the same for each hedge fund. Someone entering an investment bank as a trader will likely have a similar role to someone else entering another investment bank as a trader. Traders at hedge funds are likely to have different responsibilities, which are usually determined by the size of the fund. At a smaller fund the trader is much more likely to be involved with the operations of the trade whereas a larger hedge fund would have a separate operations person to handle this element. A smaller hedge fund may have 3-4 employees whereas a larger hedge fund may employ over 300 people.

A typical hedge fund will have various departments: operations, accounting, trading, and risk and investor relations. These departments support the trading decisions and operations of the hedge fund. Since the size of hedge funds vary dramatically, the number of people in each department can range from one to over 20. As a hedge fund grows in size (manages more money), more personnel are added to support the increased trading volume.

In the next few pages we will attempt to clearly outline the different departments at hedge funds and the distinct roles within each department. While you read through the different roles it is very important to note that specific job titles are not important at hedge funds. This is because one role (job) can have many different titles depending on the hedge fund. For example, an Operations Analyst can also be called Portfolio Analyst, Trading Assistant or Accountant depending on the size and environment of the fund.

In addition, due to the varying sizes of hedge funds, employees tend to have a more diverse range of responsibilities, which may overlap between several different departments. This unique nature of the hedge fund job requires superior teamwork skills and the ability to deal with a variety of people.

Director of Operations

Most individuals carrying this title either have several years of experience in the same capacity, a MBA or both. At this stage one generally has a staff of two to 10 people who are direct reports. The job functions are similar to the Operations Specialist although there is much more responsibility for the employees working under you as well as maintaining relationships between prime broker, banks, and off shore administrators.

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This position will generally pay between \$100,000 and \$250,000 depending on experience, background and size of hedge fund.

A Day in the Life: Director of Operations

7:30 a.m.: Arrive at the office and log on to the computer, along with various back office and portfolio systems such as DTC. (See Glossary)

8:15 a.m.: Go over exception reports (available only to a manager) that show trades that have not settled and any Margin Calls for accounts and speak to the member of staff who works on it to get status on the item.

9:00 a.m.: Have weekly team meeting and go over team workload and coverage for the week.

10:00 a.m.: Get on a call with a manager in the prime broker because a large wire needs to be sent out for management fees and there needs to be extra attention given to it to make sure it goes through properly. The Prime Broker is described in detail in a few pages. In summary it is a department at an investment bank that offers products, technology and clearing services to a hedge fund.

11:00 a.m.: Have a meeting with the head trader on the convertible trading desk who does not agree with the final position on a particular security. Go over each transaction and see if anything was incorrectly booked. Have one of the staff members print all transaction reports internally and at the prime broker to find a solution to this problem as it may involve large losses for the desk.

1:00 p.m.: Have lunch at the desk while browsing through some stories on Bloomberg.

2:00 p.m.: Field calls and help the staff resolve any pending problems.

4:00 p.m.: Re-review all reports from the morning and make sure all highlighted discrepancies are resolved otherwise jot them down as "open items".

5:00 p.m.: Create a list of agenda items for the next day and look at the calendar of any meetings.

6:00 p.m.: Leave work and meet the prime broker for dinner who is taking the operations team out.

7:00 p.m.: Discuss rates with the prime broker over dinner and get to know them better.

10:00 p.m.: Head home and try to get the motivation to go to the gym before crashing.

Risk Management

The risk department proactively monitors each hedge fund, identifying potential risks and then determining and understanding the importance of various types of risks. This department uses various propriety or vendor tools and methodologies for risk management and implements strategies to prevent any risk completely or to deal with them if they occur.

At a hedge fund, a risk management role can vary depending on the size of the fund. At a small fund generally the principals or the trading group may monitor the risk and there are no specific risk personnel versus at a larger fund there is a group who is solely responsible for monitoring risk. Many hedge funds are also known to outsource their risk controls through third party vendors specialized in providing this service to corporations, hedge funds, mutual funds etc. Many investment banks also provide such added value service through their prime broker departments (described later in the book).

Fund of funds are known to have a very large risk teams because of two reasons: Firstly, due to the way fund of funds operate they are dealing with a large variety of securities product base and secondly the risk group plays a large role in alleviating concerns of existing and potential investors.

Risk Associate

This associate level position will play a supporting role in the risk department. Many hedge funds don't have a separate risk department but this position would be available at an investment banks prime broker department.

At a prime broker the risk associate will perform the same duties except he will be monitoring risk for several hedge funds that are prime broker clients. This position generally requires a minimum of a bachelor's degree and a few years of relevant experience. A thorough understanding of a variety of trading products (i.e. options, fixed income, mortgage backed securities, swaptions), options risks (i.e. delta, gamma, Vega, rho, and theta)* and strong analytical skills are strongly recommended. The daily job duties include but are not limited to maintaining Value at Risk (VAR) data, back-testing and stress-testing securities within a portfolio and reporting the analyzed data to senior risk management.

For example, Heather works with the trading group to monitor risk. The hedge fund where she works subscribes/utilizes a risk monitoring system designed by a large investment bank. Every morning she will perform analysis to the short portfolio measuring how minor changes in the stock market such as the Dow Jones Industrial Average decreasing substantially in one day, could affect the value of the portfolio. Heather does not have to compute everything manually because the Risk system has built in mathematical models to attribute for different scenarios, although Heather needs to understand what the output of results mean and be able to verbally communicate those clearly to the traders and portfolio managers along with having spreadsheets and graphs as back up of her analysis.

This position generally pays from \$50K to \$70K, depending on geographical location, previous experience, education skills and size of the corporation. The risk position could potentially have interaction with clients (investors) depending on the size of the fund. Some hedge funds have a designated investor relations employee whose sole responsibility is to field calls from investors. Although, in smaller funds investors may call the risk group directly to state and address any risk concerns. It is important that a hedge fund has a strong risk monitoring system because this reduces the likelihood of error and losses in the fund and will also help alleviate the investor's worries.

Risk jobs are found through job agencies or through connections. Generally traders also are well aware of job openings in the risk groups and can be a good source of contact/network.

A Day in the Life: Risk Analyst at a Large Hedge Fund

7:30 a.m.: Get into the office and check e-mail. Chat with colleagues about interesting stories in the WSJ.

8:00 a.m.: Daily risk conference call with traders, portfolio manager and principals

9:30 a.m.: Monitoring the portfolios on one screen while looking at the markets affecting the various securities on another screen. Quantify illiquid positions and valuations risk and compare margin requirements of all positions with the custodian/prime broker making sure you are in agreement.

10:00 a.m.: Call the prime broker risk department and discuss risks involved in utilizing more leverage for a particular option arbitrage fund. Write up a report based on the call to present to the principals.

11:00 a.m.: Compile statistics for the ongoing exception report for non-investment risk issues such as trade settlement, particular trader leaving the organization, etc.

12:00 p.m.: Making sure that the portfolio is maintained within established risk parameters

1:00 p.m.: Eat lunch at the desk while preparing for the 1:30 meeting with potential investors of the hedge fund who want to discuss business and corporate structure of the hedge fund and its links to the investment manager.

1:30 – 2:30 p.m.: Meeting with investors in a conference room. Emphasize the safety of assets to the investor because of proper risk monitoring.

2:30 p.m.: Re cap the meeting with principals, see how it went and make a list of items to follow up with the investor. It is very important that the risk manager gets rid of any potential investors concerns of sudden losses.

4:00 p.m.: Work with the CFO to have him clarify a problem you noticed on last month's audit.

5:00 p.m.: Field calls and answer e-mails on all risk and portfolio inquiries to internal and external people.

7:00 p.m.: Look over notes from today and jot down any items that needs to be addressed tomorrow.

7:15 p.m.: Review schedule for next day.

7:30 – 8 p.m.: Head home and get to bed early for a good night's sleep.

Hedge Funds Employer Directory

Andor Capital Management

153 E. 53rd St., 58th Fl.

New York, NY 10022

Phone: (212) 224 5800

Fax: (212) 224 6010

www.andorcap.com

Citadel Investment Group

131 South Dearborn Street

Chicago, IL 60603

Phone: (312) 395-2100

Fax: (312) 977-0270

www.citadelgroup.com

Moore Capital Management

1251 Avenue of the Americas, 53rd Fl.

New York, NY 10020

www.moorecap.com

Pequot Capital Management

500 Nyala Farm Road

Westport, CT 06880

Phone: (203) 429-2200

Fax: (203) 429-2400

www.pequotcap.com

Soros Fund Management LLC

888 Seventh Ave., 33rd Fl.

New York, NY 10106

Phone: (212) 262-6300

Fax: (212) 245-5154

D.E. Shaw & Co.

120 W. 45th St., 39th Fl., Tower 45

New York, NY 10036

Phone: (212) 478-0000

Fax: (212) 478-0100

Farallon Capital Management

1 Maritime Plaza Suite 1325

San Francisco, CA 94111

Phone: (415) 421-2132

www.faralloncapital.com

Maverick Capital

767 Fifth Avenue

11th floor

New York, NY 10153

Phone: (212) 418-6900

Fax: (212) 418-6901

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High Tech

Technology is Everywhere

Information Technology (IT) is a huge, ever-changing field. It encompasses the products and services necessary to store, convert, and deliver information electronically. This includes the entire computer infrastructure of an organization: computer hardware, packaged software, computer system architecture, documents outlining technical procedures, many other computer-related products, and lots and lots of people.

Computers and IT continue to have an explosive impact of on life and business. More than ever, companies must rapidly evolve, incorporating new technologies into their daily operations to remain competitive. From one-man sales companies to international medical labs, almost every type of business utilizes an IT infrastructure to run, to expand, and occasionally, to simply comply with the law.

IT is essential to business because it allows people to communicate faster, more efficiently, and with more capabilities than older technologies. A lone costume maker in Illinois can suddenly turn her enterprise into an international business by putting up a web site. A corporate executive can instantaneously deliver vital information to associates in Japan, South Africa, and England through the power of a secure network. A student whose laptop gets stolen can immediately retrieve all of his lost information from a backup database server. A doctor can use a computer program that makes all of his patients' correspondences and information secure from prying eyes. There is power in IT.

Since technology issues are so critical to a company's health, a significant portion of business is involved with IT. In fact, one in every 14 jobs in America is an IT or IT-related position. IT careers cover a broad range of businesses, skill paths, office sizes, and backgrounds.

The scope of IT

Today, IT is integral in most businesses, and its definition is still being redefined. Although most jobseekers know that IT involves widespread technologies, few trying to enter the field probably know just which technologies or which jobs it encompasses.

Authorities describing IT demonstrate how widespread yet "blurry" the field is. First of all, "There is not a government-wide definition of who is classified as an Information Technology worker," says Roger Moncarz, an economist for the U.S. Bureau of Labor Statistics. "There's a wide sampling of estimates out there, for exactly how to define an Information Technology worker."

Moncarz continues, "Based on our definition of information technology workers, and based on government occupational surveys, we come up with 3.3 million to 3.5 million IT workers in America. The Information Technology Association of America (ITAA), in their recently released study, says there are 10.4 million IT workers. So there's wide discrepancy."

Regardless of who may define it, one thing is certain: IT is everywhere. Offices large and small must maintain, utilize, and upgrade IT infrastructures to be effective in the marketplace. Because of the ubiquitous and demanding nature of the technology, IT jobs run the gamut from entry-level, low-tech positions to tech-savvy engineering managers.

The MBA in Tech

So you're in IT and you decided to get an MBA. Perhaps your degree even came with a technology specialty, which is an increasingly common option. Where will your degree get you?

Despite the lore of the 1970s-era computer “hackers” who revolutionized personal computing by working out of garages, many other people even then were studying for MBA degrees and were interested in technology. In the five-year period from 1976 to 1981, Harvard Business School produced Dan Bricklin (VisiCalc), Scott Cook (Intuit), Donna Dubinsky (Palm), Meg Whitman (eBay), and many others. Bricklin was an MIT-educated engineer, but has stated that he thought of many core ideas for the electronic spreadsheet while in business school.

Today, working in IT or working at a technology manufacturer offers many opportunities for MBAs to advance. Some of the popular fields are consulting, director-level positions, finance, law, marketing, project management, sales, training, and the ultimate, which is C-level leadership.

Project management

As a project (or product) manager, you have a very specific set of goals to meet. They typically include detailed technology specifications to follow, deadlines to make, and of course a budget to stick with. Maybe you’d be put in charge of an IT department’s rollout of a new software product for internal users, or in charge of a certain operating system version of a certain piece of hardware. Either way, acquiring an MBA as a project/product manager can lead to doing the same job but with a bigger company, or to a position with a VP title. As in marketing, project/product managers need a very wide range of skills and knowledge, so having your MBA can only help. If you’re a hardcore engineer or programmer, the MBA will help you break into project/product management.

Marketing

If the intensity of the IT lifestyle makes you feel burned out, and you have some creative DNA, then you may be a good fit for a position in technology marketing. The field involves dealing with advertising, partners, the press, and anything related to corporate outreach. In technology marketing, more so than in other fields, you will be expected to know quite a bit about the technology in question. By getting that MBA you can also understand the technology’s business strategic situation, and have a good chance at moving up into upper management.

Tech consulting

Many tech consultants are former successful technologists who desire to share what they’ve learned with others. With just IT experience, you can get an entry-level consulting job, which means interfacing with your client’s own IT staff about their special needs. With a few years of experience and the addition of an MBA degree, you can open your own consulting firm, be invited to participate in panels at trade shows, or perhaps move from out of consulting and into the exciting world of venture capital. (To be a VC, you need to excel at understanding business and technology hand-in-hand, just as good consultants do.) You can also become an in-house consultant for a very large company, which may involve more deadlines and politics to play, but leaves you not having to worry about finding new customers.

Director jobs

If you work for a company that makes technology products, instead of working in the IT department of a company that simply utilizes technology, then possessing an MBA degree will often lead you into a “director” level job. For example, you might become the director of printers for a company that makes business technology, or the director of R&D for a military software contractor. As a director, your role is a notch below the division vice president and a notch above the various product managers. Product managers work on just one thing, but as director you’re also working on a technology group’s sales, marketing, manufacturing, etc.

Finance and law

Finance and law positions in an IT department or at a technology vendor have some aspects that are unique compared to working in other fields. You may have to deal with patent issues, foreign employee visas, international licensing laws, making sure the IT staff follows legal compliance rules for backing up data, and working with multiple layers of distributors, partners, and resellers. By getting an MBA degree as well, you are in good position to become a company's operations director, or even to get a C-level position if you have extensive sales or technology experience as well.

Sales

In sales the job description is very clear: generate revenue for the company. By having an MBA you can manage entry-level staff, get the best and biggest clients, get into working with partners and resellers, or even enter the field of "competitive intelligence" which is a nice way of saying corporate espionage.

Training

As an IT trainer you have many career options. You can work in a classroom setting, manage advanced customer support, become involved with technical writing, educate the sales staff, or work with your company's technology partners. With an MBA degree you can become a manager and get a title such as call center director or VP of user experience.

Upper management

Last, and the hardest job to get, is technology upper management. To become a CIO, CTO, or even a CEO in the technology field, an MBA degree is almost a requirement, especially at large companies. There are a lucky few who become business leaders straight out of core technology jobs (and with a lot of natural talent)—the world's richest person, Bill Gates, never even finished his undergraduate degree. But for mere mortals, if you want to become an IT business leader, you can't go wrong with an MBA: it will help you close big sales, manage your company's logistics, strategize for growth, and prepare you for the executive suite.

Tech Experience and the MBA

Of course, getting an MBA is not enough for a successful career in tech. "My gut reaction is, get the real-world experience," says Paul Buonaiuto, director of recruiting for Computer Associates International Inc., the Islandia, N.Y. company specializing in business management software. The problem with classroom experience alone, he says, is that "Unless you're really out in the trenches, it's difficult to implement sometimes what you read in a book. Real-world experience I hold in more high regard." And even when a rookie MBA gets hired, there is usually the need for some amount of re-training, as "A lot of the [MBA] case studies are dot-com [or] an Enron or a latest-greatest merger," Buonaiuto explains.

To really stand out in the hiring process, the ideal job candidate should also have some kind of hands-on technology experience, Buonaiuto said. Candidates that well rounded come along "almost never," he says. When a pure MBA interviews in technology, "What's sorely lacked in those folks looking for a job is research skills. It becomes painfully evident in the interview" that they know about CA's stock performance but know nothing about its technology other than what's on the web site, he said.

Many future executive candidates start out as technical employees or lower-level managers. For them, many companies will pay for a portion of their MBA educations. There are a wide range of choices for where to get it—a traditional MBA program gives you the recognition that business is business and profits are profits, regardless of your industry, while a specialized technology MBA program (such as in e-commerce or systems management) will make you stand out but can be risky if your

chosen specialty market has a downturn. Magazines like *Computerworld*, *BusinessWeek*, and *U.S. News & World Report* sometimes publish features dedicated to ranking the graduate programs. The relative newness of specialized degrees is another common point of debate: it's been noted many times before that the leading rankings often wildly disagree.

Vault Q&A: Catherine Wang, Intuit

Prior to attending the Stanford Graduate School of Business, Catherine Wang had little experience in high tech. While at Stanford, however, she landed an internship at Silicon Valley stalwart Intuit and took a position as a marketing manager upon graduating in 2005. Wang took some time out from her busy schedule to talk to Vault about her experience as an MBA at a tech company.

Vault: Tell me a little about your experience prior to business school

Wang: I was in consulting at McKinsey for two years and then worked with Charles Schwab for two years before going to business school.

Vault: Did you know going into business school that you wanted to move into high tech marketing?

Wang: I actually wanted to do marketing in general, so technology was less important. I chose Intuit less because Intuit is a software company, but more because of Intuit's approach to customers. Intuit is definitely not a technology company for the sake of being a technology company. It just happens that they use technology to solve their customer's needs. Frankly, I didn't interview with many tech companies, but was interested in Intuit's strong marketing organization.

I did my summer internship at Intuit. You can do either marketing or product development on the MBA side. The internship was very structured—lots of meetings with senior executives of the company, intern events, things like that.

Vault: Were there a lot of MBAs that joined Intuit at the same time you did?

Wang: There really isn't an MBA class my year; Intuit kind of hires MBAs as needed. That said, there's tons of MBAs at Intuit and there's tons of Stanford MBAs at Intuit.

There are many people who have very very similar backgrounds to you. We are a big company, but the culture at Intuit is very collaborative, it's very much about helping people out, getting to know people. You don't really have to be very proactive in networking, a lot of people reach out to get to know you. It's part of the company culture to make sure you have the mentors you need that you have the network that you need.

Vault: Tell me about your current position at Intuit

Wang: I'm a marketing manager, working on our payroll service, which is a small business solution that enables small businesses to do payroll in-house. It's a service within the Quickbooks product.

Vault: How is it delivered? Is it a CD or through the Web?

Wang: It's functionality that we turn on in Quickbooks. Think about your Cable TV, and how there are different packages. If you pay more, you get HBO versus if you didn't pay for it. It's kind of like that—we turn it on for you. Quickbooks itself can be downloaded from the Web or you can buy it off the shelf and install it.

Vault: So what does it mean to be a marketing manager at Intuit?

Wang: So marketing manager is comparable to a brand management position. What I manage is one of our channels, the phone channel. I work a lot through our call centers, to make sure that they have the materials they need. Our main call centers are in Tucson and Reno, so I go to each of them about once a month. Right now, I'm in Tucson.

We have a group of 12 marketing folks within payroll. For example, there's someone focused on retail, so packaging is a more important part of her responsibilities than it is for me. We also have someone who focuses on the web channel who's responsible for the content displayed on the web.

Vault: What is your impression of how marketing management at Intuit and other high tech companies compares to brand management at traditional packaged goods companies?

Wang: My perception is that with many consumer packaged goods companies, there's more of a focus on marketing. I would say it's less so that way here, because technology plays an important role. It's more of a balance.

I think a big difference between Intuit and a lot of other tech companies, however, is that marketing is very important. I did interview at tech companies where the folks I was interviewing with would say, "Honestly, we have some products that have certain functionality because the engineers thought it was cool." Here, the focus is on the customer and so I don't think you have that tension between engineering and marketing.

Vault: In brand management at traditional packaged goods companies, brand managers interface with a wide variety of departments in an organization. Who are you working with mainly?

Wang: People from all levels, starting from sales managers to coaches who lead a team of about 15 agents. We're very customer focused, so I spend a lot of time listening on calls to agents, to see who what our customers are saying, or doing agent focus groups.

For example, we did six focus groups around what types of marketing messages we should emphasize. This starts with identifying what are the benefits that customers really value, that has implications that they really sell—so if customers are saying that a benefit is not important, the salespeople aren't going to focus on that.

Vault: What about getting customers in the door in the first place?

Wang: So I also deal with lead generation—getting calls into the call center. That involves working with our managers who manage Quickbooks.com or Payroll.com, as well as working with our direct marketing organization. Direct marketing is a centralized function at Intuit, so all marketing managers coordinate with that team.

Vault: What other responsibilities do you have?

Wang: Although we're largely structured by channels, we also spend some time on different issues that affect all channels. For me, beyond telesales, I work on pricing promotion across channels. These promotions must be coordinated with other channels.

Vault: Was there a particular reason that pricing promotion fell under your oversight? Does it have particular relevance to the telesales channel?

Wang: No, it was just how things were divided up.

Vault: So are you frequently interacting with the marketing managers overseeing other channels?

Wang: Yes, definitely—every day, if not more frequently. Things that we do in one channel affect other channels. If we do a promotion on the Web, we know not everyone is going to order through the Web, some will call. If we are trying to grow sales of one particular product, that affects all channels.

Vault: Are you often in contact with the engineers building the products?

Wang: Not so much. We interface more with the product marketing folks. Of the 4 Ps in marketing, the marketing side is really focused on the pricing, promotions and placement. The product piece is really the ownership of the product managers. The product managers are the ones who take customer requirements, find out what functionality is missing, and they work with engineers with the product themselves.

The product managers and engineers work on future functionality, the marketing group focuses on selling current functionality.

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Human Resources

Every organization has people, which means every organization needs Human Resources (HR) professionals. HR helps manage and develop the people in an organization. Sometimes called “Personnel” or “Talent Management,” HR is the function in charge of an organization’s employees, which includes finding and hiring employees, helping them grow and learn in the organization, and managing the process when an employee leaves. Human Resources takes care of people from the time they’re interested in the organization to long after they leave.

The History of Human Resources

Now a thriving, growing profession, Human Resources wasn’t always a key part of most organizations—if at all. Until the early 1900s, all human resources functions were typically handled by the workers themselves or their bosses (often called master craftsmen). As more workers were needed, master craftsmen would just go out and find them (talk about the birth of recruiting!)

When the 1900s brought inventions and changes in the workplace, like machines that automated production, human resources began to take shape. The addition of machines made factories run more quickly and smoothly, but also meant that the workers had to learn how to use them, and forced factory managers to introduce rules and procedures on the factory floor.

Frederick Taylor, a businessman and researcher, first introduced the concept of scientific management. Taylor’s theory took workplace rules and procedures one step further, declaring that there was only one best way to do a job. He spent years collecting data on the tasks making up specific jobs and then researching the workers who performed each small task. Workers who performed well, following tasks to the letter, remained employed and were paid well. Those who didn’t were among the first to hear “you’re fired.”

Taylor’s research was the first to increase worker productivity, but his robotic approach didn’t prove to be an effective management tool. Still, his work showed the importance of managing workers to increase a company’s success. While Taylor’s work focused more on company success than that of the worker, it propelled many companies to begin to personalize the workplace, anticipating the first appearance of HR. One of the earliest HR roles was that of a welfare secretary whose role was to look out for the welfare of the workers. An ancestor of what’s now called a Benefits Manager, welfare secretaries created libraries and recreation areas in the workplace as well as primitive medical and health programs.

But HR really took shape in the 1930s when a company called Western Electric asked a team of researchers to figure out how to increase workers’ productivity at one of their plants in Chicago. The Hawthorne Studies, taking their name after the targeted plant, set out to determine whether changing the lighting in the plant could help the employees work faster. What they found instead was how important it was for plant managers to pay attention to the workers, reward them for a good job and make sure they were satisfied. The idea of happy workers being productive workers took hold and still remains true today. If a company wants to perform well, it has to create and manage a content workforce. HR plays a critical role in making sure that happens.

The Hawthorne Studies fueled the study of worker behavior in organizations, and what was called behavioral science. The growth of behavioral science as a field studied how jobs and the workplace affect workers and how workers affect the performance of a company.

The study of behavioral science reinforced the importance of welfare secretaries. The secretaries’ jobs became more and more complex as governments introduced labor laws to keep up with the changing workplace. These laws, restricting the rights of both employers and employees, required the welfare secretaries to keep paper records of employees and their activities. One of the first human resources laws, the Fair Labor Standards Act (FLSA) created a minimum wage, set rules for child labor and required employers to treat employees fairly in regards to wage and hours worked.

In many industries, workers also began organizing into unions—groups of workers banding together to lobby for rights in the workplace. New laws around union activity also required companies and welfare secretaries to understand and comply with the laws.

Many companies began hiring multiple welfare secretaries—one responsible for hiring employees, another responsible for employee benefits and perhaps another to train employees on the factory floors. These specialty areas evolved into the specialty areas of the Human Resources profession today.

Human Resources Today

Today, human resources is essential to the success of business. The level of importance HR holds does differ from organization to organization, but businesses consistently rely on HR professionals to help them through high-growth times and periods of turmoil. Regardless of how successful (or not) an organization is, there is always a need for HR staff. The welfare secretary title may be long gone, but the idea of having Human Resources professionals focus on specific areas of managing and developing a company's workers has remained. Now, in most organizations, there are HR professionals who focus specifically on hiring, training, benefits, labor relations, health and safety and more.

While it's important to like working with and wanting to help people to be successful in HR, that's definitely not the only skill or attribute you need to be a successful HR professional. HR is about creating systems, processes and environments where employees perform better and are satisfied, and there are many different career paths and opportunities in the profession. For example, HR professionals can take center stage as a recruiter or trainer. In these roles, you're interacting with people all day long, whether conducting interviews or running a training course. But HR professionals can also serve behind the scenes, administering payroll, tracking HR metrics (statistics about company workers) or running an organization's Human Resource Information System (HRIS), technical databases where all employee data is stored and managed.

While HR continues to grow as a function, in many companies it does not carry the importance or value of its colleagues in finance, sales or marketing. Know that as satisfying as an HR career can be, the profession still struggles to gain respect in many places.

What Do HR Professionals Do?

Typical HR responsibilities are focused in major areas such as recruiting and staffing, compensation and benefits, training and learning, labor and employee relations, and organization development. Most HR professionals have experience in one or more of these specialty areas. These areas all deal with helping employees in an organization perform more effectively and satisfactorily on the job.

Recruiting and staffing

You're either in or you're out. When an employee leaves and a job opens up or new jobs are created, HR is usually in charge of the process. Recruiting and staffing is one of the largest areas of HR. Recruiters start the process—working with specific departments to write job descriptions and understand what skills and abilities the new employee should have. Then they're off and running—responsible for finding candidates, determining who might be a good fit, conducting interviews and making job offers. While recruiters involve department employees in the process to interview and make the hiring decisions, it's the recruiters who are usually in charge of finding the talent, managing interview scheduling, negotiating offers and making sure departments have all the information they need to make the best hiring decisions possible.

While recruiters work to find and hire the talent, staffing experts determine who should go where. They strategize with different departments to anticipate hiring needs and help determine where a new employee might best fit in an organization.

Staffing professionals are heavily relied on in high-growth companies to make sure the company is prepared to hire enough new employees to grow the company, and that employees are in the right positions.

Recruiting and staffing professionals are also called upon to help an organization market to prospective employees. This can include creating and managing recruiting events, designing marketing pieces such as company brochures and commercials, and staffing career fairs to educate prospective employees about open opportunities. Many organizations also have recruiting and staffing professionals dedicated to working with universities. These roles are focused on finding talent on undergraduate and graduate school campuses and can include a great deal of travel and campus presentations.

Compensation and benefits

Finding talent is important, but employees also have to be paid. HR, specifically compensation and benefits professionals, are in charge of making sure new employees are given an appropriate salary and benefits, and current employees continually receive their salary and benefits.

Compensation experts focus on the money. This includes processing regular payroll (making sure that the check is in the mail) and payroll changes, including raises and tax changes. Compensation experts also work closely with an organization's finance department to ensure salaries stay within each department's budget, as well as conducting and researching salary surveys to make sure they're paying the going rate.

Benefits professionals also have to make sure employees are taken care of—they specialize in helping employees with medical and other company benefits. This may include teaching new employees about their medical plan choices, implementing and managing the plans offered by the company, and managing the cost of benefits for the company.

Compensation and benefits professionals are also often tasked with communicating salary and benefits information to employees. This may include marketing and promoting new benefits offerings to a company or managing an company's Open Enrollment Period—a brief period of time where employees can change medical plans and other benefit options.

One-on-one counseling may also be part of the job. If an employee leaves an organization, the benefits manager may counsel the employee on access to health insurance available after departure. Employees also often seek guidance on understanding their compensation packages, making changes to employment tax forms or managing a difficult medical insurance claim.

Training and learning

Part teacher, part manager, part leader—that's a training professional. Helping employees become oriented to a new job or company is just one of the many responsibilities of training and learning professionals. Sometimes called training, or learning and development, it's helping both new and tenured employees develop and grow as professionals both on and off the job.

Training and learning professionals are typically responsible for running programs designed to educate and develop employees. This can include programs for an entire employee population, such as new hire orientation or ethics training, but also includes more specialized programs for different groups of workers within a company, like online training courses, in-class instruction or on-the-job training.

Training managers, for example, are called upon to do everything from registering and tracking training courses, to developing new courses and evaluating the effectiveness of training programs after they happen. This may include designing surveys or determining if newly trained employees perform better than they did before the training. They also may be responsible for providing information to employees on training classes and programs outside the company.

In some organizations, training and learning professionals actually deliver the training courses. They might create a presentation skills course and then send trainers on the road to teach the new course to employees around the country. Since it's often cheaper to train current employees rather than hire new ones, training and learning is becoming increasingly

important in the business world. A company's strong commitment to training and development is also a boost to its workers' morale.

Labor and employee relations

Just like welfare secretaries responded to new laws in the early 1900s, labor and employee relations professionals ensure that anything dealing with employee contracts, rights, responsibilities and complaints is taken care of right quick.

Labor relations is a function typically found in companies whose employees are members of unions. Labor Relations professionals are called upon to deal directly with unions, doing everything from interpreting current union contracts to negotiating new ones. They also analyze and monitor union activity and work with unions during organizing campaigns—the time when unions recruit new members.

Employee relations professionals need to be familiar and comfortable with the law; they are also responsible for equal employment opportunity and affirmative action programs. For government agencies or companies that do work for the government, this may include creating reports to demonstrate a company is complying with the law and making an effort to hire and retain employees from underrepresented ethnicities. Other key responsibilities may include counseling or conflict resolution within an organization, helping employees who are dealing with disagreements in the workplace or have issues preventing them from doing their jobs.

Labor and employee relations is not found in every human resources department. Organizations that don't have government contracts or unionized employees may rely on outside attorneys or consultants to deal with any legal issues or employee conflicts that arise.

Organization development (OD)

While developing employees is important, perhaps just as important is developing an organization. A relatively new field, organization development focuses on evaluating how a company is structured and how employees work together to see where improvements can be made. Also referred to as organization effectiveness, this might include helping to restructure the chain of command in a department to helping employees cope with a major change, such as the introduction of a new company-wide technical system.

OD professionals are experts in understanding behavior and psychology. They often act as internal consultants, helping their fellow employees understand how a new company program might affect the employees' behavior.

They often work closely with Training Professionals to address development needs for the company. OD Professionals may develop company-wide team-building activities or introduce new programs for leadership development.

OD specialists often manage the performance review process, making sure that employees are evaluated and moved within the organization based on how well they're working. OD Specialists may also help companies develop succession plans (determining who is in line to be the next person in a leadership position, such as CEO or CFO) and mentoring programs, making sure less experienced employees can learn from their more experienced comrades. OD professionals may also be called upon to help an employee address individual issues through executive coaching, or a department address a leadership or performance challenge.

Less common OD work may include coaching or career development. Coaches, common at the executive level, help employees overcome poor teamwork or management skills. Many large firms are hiring external coaches, or creating coaching functions in order to help valuable employees deal with singular issues that may prevent them from being promoted.

Health and safety

Factory machines, hazardous chemicals and construction sites are all potentially dangerous situations for workers. This is where Health and Safety Professionals come in. One of the oldest HR specialties, Health and Safety professionals are responsible for ensuring a safe working environment for all workers—this is more of an issue in industries with risky work settings such as manufacturing, healthcare and construction. While all organizations must protect the safety of their employees while at work, it is more complicated in industries that have worksites beyond a typical office environment.

One of the major components of the role of a Health and Safety Professional is to be proactive—assessing a work environment to anticipate where the dangers might be and correcting them before an injury occurs. This might include periodic tours of a work site, or research into the latest workplace safety options.

Health and Safety Professionals are also responsible for reacting to issues, concerns or problems related to the workplace environment. They might handle a complaint from a worker about a dangerous factory machine or an on-site injury. They work closely with compensation and benefits professionals to handle any injuries and determine how to prevent future injuries from occurring.

Working with an organization's legal team and employee law specialists is also part of the role. Health and Safety Professionals are responsible for following Federal and State rules governing workplace safety including, in some industries, submitting reports that demonstrate a company's compliance with the law.

Why HR?

While HR professionals have varying degrees of interaction with an organization's employees, all HR people can enjoy the satisfaction of knowing that the work they do has a direct impact on people every day. HR professionals like helping employees navigate through tough problems and get back to normal on the job. Whether it's helping an employee overcome a performance problem or fix an expensive and stressful medical claim, there is an inherent satisfaction in these types of tasks.

They also enjoy the ability to interact with different groups of people; HR professionals may be working with employees in many different parts of the company. Organization development specialists may act like internal consultants helping different departments in a company work better together. This means they might be working with a sales team one week and a product design team the next. So there is a ton of variety in their day-to-day tasks.

In his role at Bank of America, Phil Skeath likes the diversity of projects. "Each time I am on a new project," he says, "I find myself identifying general concepts I learned in my educational experience, adapting them, and applying them to a specific issue in the Bank."

They also like contributing to the business and bottom line. For example, one of the most common issues CFOs are facing in 2005 (according to *CFO Magazine*) is the rising cost of healthcare. HR and benefits professionals who analyze how to lower these costs can save a company millions of dollars. Talk about making an impact.

Why not?

For most HR professionals, the positives of working in HR (such as extending a job offer to a very excited job candidate) are enough to outweigh the drawbacks (in the opposite category, downsizing or laying off employees). Otherwise, they wouldn't be there in the first place. But no job is perfect. Even rock stars have to deal with annoying paparazzi and screaming fans. While it's highly unlikely you'll be chased by reporters working in HR, you may be chased by unhappy employees. One of the toughest things about working in HR is providing a service many employees take for granted. No one says "thanks HR" every time they get a paycheck. But if something goes wrong, if employees don't get paid, if benefits disappear or new employees aren't trained properly, you may end up with a mailbox full of angry callers to contend with.

Like many professions, starting out in HR you may also have your fair share of administrative work. Many HR careers may begin with processing paperwork for new employees, or entering and maintaining resumes in an online database. This might seem like menial work, especially if you've just received a college degree, but don't walk away too quickly. These roles, while tedious, provide a great learning opportunity and a chance to prove you're ready for more responsibilities.

HR also suffers from some common misconceptions, like being a touchy-feely profession or being female-dominated; we'll go into some of these misconceptions and how to deal with them later in this guide.

Ready to help your colleagues and organization perform better? Before you determine what type of HR role you might best be cast in, it's important to understand that HR as a function isn't the same in every organization.

Human Resource Management (HRM)

Human Resource Management (HRM) is the set of traditional HR activities that manage or support the people in the organization, and every working organization has to have at least one person responsible for HRM. The major areas of HRM include:

- Recruiting and Staffing
- Compensation and Benefits
- Labor and Employee Relations
- Health and Safety

In HRM roles, professionals need to keep the HR motor humming and wheels turning. Imagine if you stopped receiving your paycheck or if your company stopped recruiting altogether. HRM functions are key to keeping organizations running smoothly, and HRM professionals are responsible for preventing any interruption in services that employees expect.

HRM professionals are also responsible to the organization as a whole. Running all of these processes can cost a lot of money, and it is up to HRM professionals to make decisions that help save the company money and make sure employees are well-served. In each of the major areas of HRM, professionals are continually evaluating processes and implementing new programs and systems to better serve the organization. Examples include:

- Recruiting and Staffing: recruiting management systems (RMS) or applicant tracking systems (ATS) are the latest trend in electronically managing the influx of resumes during busy recruiting times. These systems save organizations money by streamlining the recruiting process and requiring fewer staff members to manage employee records.
- Labor and Employee Relations: legal training for managers on topics such as sexual harassment and workplace law is becoming more and more common, in order to proactively reduce lawsuits related to workplace behavior.
- Health and Safety: while injuries at plants and hazardous sites are common, HR professionals are also recognizing the increase in office injuries; many Health and Safety professionals are introducing ergonomically correct office furniture. While these fancy chairs and glare-reducing computer screens may be expensive, such investments can prevent future injuries and their associated costs.
- Compensation and Benefits: benefits outsourcing is a popular way to reduce costs and responsibility for an organization. Some Compensation and Benefits professionals work with outside vendors to manage programs such as an employee stock purchase plan. Since these outside vendors already have the expertise and systems in place to manage these programs, it saves the company the expense of creating them from scratch.

Companies such as The Home Depot are well known for their HR practices, and are consistently looking for ways to ease and automate the function in order to serve customers, and ultimately the organization, better. The Home Depot has become more recently renowned for creatively recruiting veterans who have recently finished their military careers. Since advertising

on online job boards can be expensive, finding new channels to recruit prospective employees is an important way to save valuable recruiting dollars.

As a Human Resources VP for a consulting firm professes, improving the way employees are served is an important part of the job. “In the last five years, over 75% of our HR transactions have been automated to better serve our customers. We created a company Intranet and put our benefits elections process online as well as all of our employee policies and procedures. No more paper!”

HRM professionals are also often charged with reporting HR’s return on investment (ROI) to the company through tracking HR metrics (statistics on how a company’s employees are performing) and demonstrating the value HR brings to the company. Compensation and benefits professionals might track how much employees are spending on healthcare costs and seek ways to reduce them. On the other hand, an employee relations professional might track statistics on how many minorities are employed in an organization for an affirmative action report. Measuring such activity is important for HRM professionals to show their commitment to an organization’s bottom line.

HR management professionals must continually be thinking about ways to better serve and save a company money at the same time.

Common Human Resource Management (HRM) Roles

Common HRM roles include:

- Compensation Manager
- Senior Recruiter
- Health and Safety Manager
- Employment Lawyer
- Labor Relations Specialist
- Benefits Specialist
- HR Generalist

Human Resource Development (HRD)

Human Resource Development (HRD) is the second part (albeit much smaller) of the HR world. If HRM professionals are keeping the wheels turning smoothly, HRD professionals are helping them turn faster and better. Human Resource Development refers to the activities in an organization that help develop and grow employees. Many organizations simply refer to HRD as training or learning and development but in reality, it’s much more than that. HRD includes:

- Training and learning
- Organization development, which includes:
 - Succession planning (determining who is next in line for a CEO or other senior job)
 - Coaching (helping employees overcome on-the-job problems)
 - Performance management (those pesky performance reviews)

HRD is the area of HR that is growing most quickly as organizations recognize the need to go way beyond simply managing their workforce. While smaller organizations often have HR Generalists assume the responsibility for training alongside other HR tasks, large companies such as Medtronic, Bank of America and Texas Instruments have entire functions devoted to subsets of HRD such as organization development.

“Organization development is a key part of Human Resources,” says Phil Skeath, a performance improvement consultant at Bank of America. “We are business partners who support our line managers’ needs, but we are also an integral part in driving the company’s strategy.”

HRD professionals may be responsible for a certain subset of the workforce (such as training the sales force), or may serve as internal consultants working on projects as they arise, such as helping to restructure a department or working on the succession plan for an entire division. Other HRD responsibilities include employee performance evaluations, training new employees, and helping companies deal with change as the result of a new program, technology, merger or acquisition.

HRD careers are growing every year. Training and development is one area in which the Bureau of Labor Statistics (BLS) predicts growth in 2005 and beyond. This is due not only to how complex jobs are becoming, but also the aging of the workforce, and the many changes in technology requiring more and more training and development programs for workers. What does this mean for HR professionals? HRD might well be an increasingly popular career path.

Because HRD is not only growing, but is structured very differently from organization to organization, if you see HRD as a viable career path, it's important to research where it fits in specific companies. Organizations that only have a training and learning function may not see as much value in HRD as a company that has a specific organization development function.

This section was excerpted from the *Vault Guide to Human Resources Careers*. Get the inside scoop on HR careers with:

- **Vault Guides:** *Vault Guide to Human Resources Careers*, *Vault Guide to the Top Business Services Employers*
- **Employee Surveys:** Vault's exclusive employee surveys for HR employees
- **Employer Research:** Company snapshots providing business descriptions and the latest news on top HR employers
- **Career Services:** Vault Resume and Cover Letter Reviews, rated the "Top Choice" by *The Wall Street Journal* for resume makeovers

Go to www.vault.com/hr

or ask your bookstore or librarian for other Vault titles.

Human Resources Employer Directory

Buck Consultants

One Pennsylvania Plaza
New York, NY 10119
Phone: (212) 330-1000
Fax: (212) 695-4184
www.buckconsultants.com

Hewitt Associates

100 Half Day Road
Lincolnshire, IL 60069
Phone: (847) 295-5000
Fax: (847) 295-7634
www.hewitt.com

Robert Half International Inc.

2884 Sand Hill Road
Menlo Park, CA 94025
Phone: (650) 234-6000
Fax: (650) 234-6999
www.rhi.com

ADP TotalSource Group

10200 Sunset Drive
Miami, FL 33173
Phone: (305) 630-1000
Fax: (305) 630-2006
www.adptotalsource.com

Kelly Services, Inc.

999 W. Big Beaver Road
Troy, MI 48084
Phone: (248) 362-4444
Fax: (248) 244-4360
www.kellyservices.com

Spherion

2050 Spectrum Blvd.
Fort Lauderdale, FL 33309
Phone: (954) 308-7600
Fax: (954) 308-7666
www.spherion.com

Adecco SA

Sägereistrasse 10
8152 Glattbrugg
Switzerland
Phone: + 41 44 878 8888
Fax: + 41 44 829 8888
www.adecco.com

Manpower Inc.

5301 N. Ironwood Road
Milwaukee, WI 53217
Phone: (414) 961-1000
Fax: (414) 906-7985
www.manpower.com

Towers Perrin

263 Tresser Blvd.
Stamford, CT 06901
Phone: (203) 326-5400
www.towersperrin.com

Convergys

201 E. 4th Street
Cincinnati, OH 45202
Phone: (513) 723-7000
Fax: (513) 421-8624
www.convergys.com

Mercer Human Resource Consulting

1166 Avenue of the Americas
New York, NY 10036
Phone: (212) 345-7000
Fax: (212) 345-7414
www.mercerHR.com

Watson Wyatt Worldwide

901 North Glebe Road
Arlington, VA 22203
Phone: (703) 258-8000
Fax: (703) 258-8585
www.watsonwyatt.com

Hay Group

The Wanamaker Building
100 Penn Square East
Philadelphia, PA 19107
Phone: (215) 861-2000
Fax: (215) 861-2111
www.haygroup.com

Paychex, Inc.

911 Panorama Trail South
Rochester, NY 14625-2396
Phone: (585) 385-6666
Fax: (585) 383-3428
www.paychex.com

Investment Banking

What is investment banking? Is it investing? Is it banking? Really, it is neither. Investment banking, or I-banking, as it is often called, is the term used to describe the business of raising capital for companies and advising them on financing and merger alternatives. Capital essentially means money. Companies need cash in order to grow and expand their businesses; investment banks sell securities to public investors in order to raise this cash. These securities can come in the form of stocks or bonds, which we will discuss in depth later.

The Firms

The biggest investment banks include Goldman Sachs, Merrill Lynch, Morgan Stanley, Credit Suisse First Boston, Salomon Smith Barney, J.P. Morgan Chase and Lehman Brothers, among others. Of course, the complete list of I-banks is more extensive, but the firms listed above compete for the biggest deals both in the U.S. and worldwide.

You have probably heard of many of these firms, and perhaps have a brokerage account with one of them. While brokers from these firms cover every major city in the U.S., the headquarters of every one of these firms is in New York City, the epicenter of the I-banking universe. It is important to realize that investment banking and brokerage go hand-in-hand, but that brokers are one small cog in the investment banking wheel. As we will cover in detail later, brokers sell securities and manage the portfolios of “retail” (or individual) investors.

Many an I-banking interviewee asks, “Which firm is the best?” The answer, like many things in life, is unclear. There are many ways to measure the quality of investment banks. You might examine a bank’s expertise in a certain segment of investment banking. Those who watch the industry pay attention to “league tables,” which are rankings of investment banks in several categories (e.g., equity underwriting or M&A advisory). The most commonly referred to league tables are published quarterly by Thomson Financial Securities Data (TFSD), a research firm based in Newark, N.J. TFSD collects data on deals done in a given time period and determines which firm has done the most deals in a given sector over that time period. Essentially, the league tables are rankings of firm by quantity of deals in a given area.

Corporate Finance

Stuffy bankers?

The stereotype of the corporate finance department is stuffy, arrogant (white and male) MBAs who frequent golf courses and talk on cell-phones nonstop. While this is increasingly less true, corporate finance remains the most white-shoe department in the typical investment bank. The atmosphere in corporate finance is, unlike that in sales and trading, often quiet and reserved. Junior bankers sit separated by cubicles, quietly crunching numbers.

Depending on the firm, corporate finance can also be a tough place to work, with unforgiving bankers and expectations through the roof. Although decreasing, stories of analyst abuse abound, and some bankers come down hard on new analysts to scare and intimidate them. The lifestyle for corporate finance professionals can be a killer. In fact, many corporate finance workers find that they literally dedicate their lives to the job. Social life suffers, free time disappears, and stress multiplies. It is not uncommon to find analysts and associates wearing rumpled pants and wrinkled shirts, exhibiting the wear and tear of all-nighters. Fortunately, these long hours pay remarkable dividends in the form of six-figure salaries and huge year-end bonuses.

Personality-wise, bankers tend to be highly intelligent, motivated, and not lacking in confidence. Money is important to the bankers, and many anticipate working for just a few years to earn as much as possible, before finding less demanding work. Analysts and associates tend also to be ambitious, intelligent and pedigreed. If you happen to be going into an analyst or

associate position, make sure to check your ego at the door but don't be afraid to ask penetrating questions about deals and what is required of you.

The deal team

Investment bankers generally work in deal teams which, depending on the size of a deal, vary somewhat in makeup. In this chapter we will provide an overview of the roles and lifestyles of the positions in corporate finance, from analyst to managing director. (Often, a person in corporate finance is generally called an I-banker.) Because the titles and roles really do not differ significantly between underwriting to M&A, we have included both in this explanation. In fact, at most smaller firms, underwriting and transaction advisory are not separated, and bankers typically pitch whatever business they can scout out within their industry sector.

The Players

Analysts

Analysts are the grunts of the corporate finance world. They often toil endlessly with little thanks, little pay (when figured on an hourly basis), and barely enough free time to sleep four hours a night. Typically hired directly out of top undergraduate universities, this crop of bright, highly motivated kids does the financial modeling and basic entry-level duties associated with any corporate finance deal.

Modeling every night until 2 a.m. and not having much of a social life proves to be unbearable for many an analyst and after two years many analysts leave the industry. Unfortunately, many bankers recognize the transient nature of analysts, and work them hard to get the most out of them they can. The unfortunate analyst that screws up or talks back too much may never get quality work, spending his days bored until 11 p.m. waiting for work to come, stressing even more than the busy analyst. These are the analysts that do not get called to work on live transactions, and do menial work or just put together pitchbooks all the time.

When it comes to analyst pay, much depends on whether the analyst is in New York or not. In NYC, salary often begins for first-year analysts at \$45,000 to \$55,000 per year, with an annual bonus of approximately \$30,000. While this seems to be a lot for a 22-year-old with just an undergrad degree, it's not a great deal if you consider per-hour compensation. At most firms, analysts also get dinner every night for free if they work late, and have little time to spend their income, often meaning fat checking and savings accounts and ample fodder to fund business school or law school down the road. At regional firms, pay typically is 20 percent less than that of their New York counterparts. Worth noting, though, is the fact that at regional firms 1) hours are often less, and 2) the cost of living is much lower. Be wary, however, of the small regional firm or branch office of a Wall Street firm that pays at the low end of the scale and still shackles analysts to their cubicles. While the salary generally does not improve much for second-year analysts, the bonus can double for those second-years who demonstrate high performance. At this level, bonuses depend mostly on an analyst's contribution, attitude, and work ethic, as opposed to the volume of business generated by the bankers with whom he or she works.

Associates

Much like analysts, associates hit the grindstone hard. Working 80- to 100-hour weeks, associates stress over pitchbooks and models all night, become experts with financial modeling on Excel, and sometimes shake their heads wondering what the point is. Unlike analysts, however, associates more quickly become involved with clients and, most importantly, are not at the bottom of the totem pole. Associates quickly learn to play quarterback and hand-off menial modeling work and research projects to analysts. However, treatment from vice presidents and managing directors doesn't necessarily improve for

associates versus analysts, as bankers sometimes care more about the work getting done, and not about the guy or gal working away all night to complete it.

Usually hailing directly from top business schools (sometimes law schools or other grad schools), associates often possess only a summer's worth of experience in corporate finance, so they must start almost from the beginning. Associates who worked as analysts before grad school have a little more experience under their belts. The overall level of business awareness and knowledge a bright MBA has, however, makes a tremendous difference, and associates quickly earn the luxury of more complicated work, client contact, and bigger bonuses.

Associates are at least much better paid than analysts. An \$80,000 starting salary is typical, and usually bonuses hit \$25,000 and up in the first six months. (At most firms, associates start in August and get their first prorated bonus in January.) Newly minted MBAs cash in on signing bonuses and forgivable loans as well, especially on Wall Street. These can amount to another \$25,000 to \$30,000, depending on the firm, providing total first-year compensation of up to \$150,000 for top firms. Associates beyond their first year begin to rake it in, earning \$250,000 to \$400,000 and up per year, depending on the firm's profitability and other factors.

Vice Presidents

Upon attaining the position of vice president (at most firms, after four or five years as associates), those in corporate finance enter the realm of real bankers. The lifestyle becomes more manageable once the associate moves up to VP. On the plus side, weekends sometimes free up, all-nighters drop off, and the general level of responsibility increases—VPs are the ones telling associates and analysts to stay late on Friday nights. In the office, VPs manage the financial modeling/pitchbook production process in the office. On the negative side, the wear and tear of traveling that accompanies VP-level banker responsibilities can be difficult. As a VP, one begins to handle client relationships, and thus spends much more time on the road than analysts or associates. You can look forward to being on the road at least two to four days per week, usually visiting clients and potential clients. Don't forget about closing dinners (to celebrate completed deals), industry conferences (to drum up potential business and build a solid network within their industry), and, of course, roadshows. VPs are perfect candidates to baby-sit company management on roadshows.

Directors/Managing Directors

Directors and managing directors (MDs) are the major players in corporate finance. Typically, MDs set their own hours, deal with clients at the highest level, and disappear whenever a drafting session takes place, leaving this grueling work to others. (We will examine these drafting sessions in depth later.) MDs mostly develop and cultivate relationships with various companies in order to generate corporate finance business for the firm. MDs typically focus on one industry, develop relationships among management teams of companies in the industry and visit these companies on a regular basis. These visits are aptly called sales calls.

Pay scales for vice presidents and managing directors

The formula for paying bankers varies dramatically from firm to firm. Some adhere to rigid formulas based on how much business a banker brought in, while others pay based on a subjective allocation of corporate finance profits. No matter how compensation is structured, however, when business is slow, bonuses taper off rapidly. For most bankers, typical salaries may range from \$100,000 to \$200,000 per year, but bonuses can be significantly greater. Total packages for VPs on Wall Street often hit over \$500,000 level in the first year—and pay can skyrocket from there.

Top bankers at the MD level might be pulling in bonuses of up to \$1 million or more a year, but slow markets (and hence slow business) can cut that number dramatically. It is important to realize that for the most part, MDs act as relationship managers, and are essentially paid on commission. For top performers, compensation can be almost inconceivable.

A Day in the Life: Associate, Corporate Finance

We've asked insiders at leading investment banks to offer us insight into a day in the life of their position. Here's a look at a day of an associate I-banker at Goldman Sachs.

8:15 a.m. Arrive at 85 Broad Street. (Show Goldman ID card to get past the surly elevator guards).

8:25 a.m. Arrive on 17th Floor. Use "blue card" to get past floor lobby. ("Don't ever forget your blue card. Goldman has tight security and you won't be able to get around the building all day.")

8:45 a.m. Pick up work from Word Processing, review it, make changes.

9:00 a.m. Check voice mail, return phone calls.

9:30 a.m. Eat breakfast; read The Wall Street Journal. ("But don't let a supervisor see you with your paper sprawled across your desk.")

10:00 a.m. Prepare pitchbooks, discuss analysis with members of deal team.

12:00 p.m. Conference call with members of IPO team, including lawyers and client.

1:00 p.m. Eat lunch at desk. ("The Wall Street McDonald's delivers, but it's the most expensive McDonald's in New York City; Goldman's cafeteria is cheaper, but you have to endure the shop talk.")

2:00 p.m. Work on restructuring case studies; make several document requests from Goldman library.

3:00 p.m. Start to prepare analysis; order additional data from DRG (Data Resources Group).

5:00 p.m. Check in with vice presidents and heads of deal teams on status of work.

6:00 p.m. Go to gym for an abbreviated workout.

6:45 p.m. Dinner. ("Dinner is free in the IBD cafeteria, but avoid it. Wall Street has pretty limited food options, so for a quick meal it's the Indian place across the street that's open 24 hours.")

8:00 p.m. Meet with VP again. ("You'll probably get more work thrown at you before he leaves.")

9:45 p.m. Try to make FedEx cutoff. Drop off pitchbook to Document Processing on 20th Floor. ("You have to call ahead and warn them if you have a last-minute job or you're screwed.")

10:00 p.m. Order in food again. ("It's unlikely that there will be any room left in your meal allowance—but we usually order in a group and add extra names to bypass the limit.")

11:00 p.m. Leave for home. ("Call for a car service. Enjoy your nightly 'meal on wheels' on the way home.")

Investment Banking Employer Directory

Citigroup Corporate and Investment Banking

388 Greenwich Street
New York, NY 10013
MBA Recruiting Contact Phone: 212-816-6000
www.oncampus.citigroup.com



Citigroup Corporate and Investment Banking is a full service investment banking and securities brokerage firm, providing a complete range of financial advisory, research and capital raising services to corporations, governments and individuals. Citigroup (NYSE: C) and its affiliates, have a reach that spans over 100 countries and territories. This enables us to offer a unique combination of local market insight, as well as the expertise necessary for today's global economy.

What we give you is the chance to gain invaluable experience, leverage the insights of multicultural backgrounds and broaden your experience through global working relationships and a wide variety of work opportunities.

Business schools Citigroup recruits from

Berkeley, Haas School of Business; Carnegie Mellon, Tepper School of Business; Columbia Business School; Cornell, Johnson School; Dartmouth, Tuck School of Business; Duke, Fuqua School of Business; Georgetown, McDonough School of Business; Harvard Business School; MIT, Sloan School of Management; Kellogg Graduate School of Management; NYU, Stern School of Business; Stanford Graduate School of Business; UCLA Anderson School of Management; University of Chicago Graduate School of Business; University of Michigan, Ross School of Business; University of Pennsylvania, The Wharton School; University of Texas Austin, McCombs School of Business; University of Virginia, Darden Graduate School; Yale School of Management

Merrill Lynch

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Merrill Lynch is one of the world's leading wealth management, capital markets and advisory companies, with offices in 37 countries and territories and total client assets of approximately \$1.5 trillion.

Merrill Lynch has two core businesses - Global Private Client and Global Markets & Investment Banking Group offering a range of services for private clients, small businesses, and institutions and corporations.

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Merrill Lynch owns just under half of BlackRock, one of the world's largest publicly traded investment management companies with approximately \$1 trillion in assets under management.

We're growing our business by helping clients grow theirs.

Our client relationships are among our greatest competitive assets. We deepen and enrich these relationships through disciplined growth, innovation, and seamless execution

Business schools Merrill recruits from

Merrill recruiters from a variety of top tier graduate business schools.

Corporate Snapshot

Founded: 1914 (Charles E. Merrill & Co)
Employees: 55,300
Q3 2006 Net Revenue: \$9.9 billion
Total Client Assets: Approx. \$1.5 trillion
Total Stockholders' Equity: \$38.9 bn
Fortune 500: Ranked No.34
Stock Symbol: MER
Global Markets: 37 countries.

As of quarter-end, Q3 2006.

Investment Banking Employer Directory, cont.

Credit Suisse

11 Madison Avenue
New York, New York 10010
www.credit-suisse.com/standout

Diversity Contact:

Tanji Dewberry
Head of Diversity Recruiting
Phone: 212-538-2594
E-mail: Diversity.recruiting@credit-suisse.com



CREDIT SUISSE MBA EXPLORER PROGRAM - FIRST YEAR MBA STUDENTS

The MBA Explorer Program is a two-day educational outreach program that brings together students who are entering business school in the fall. In the past, the participants have been of diverse ethnic backgrounds, both male and female. In 2006, we targeted only women candidates. This unique program offers students who may not have an investment banking background a chance to learn first-hand about Wall Street and specifically Credit Suisse. Participants learn about the firm's core businesses and culture and get to meet with school teams and recruiters months in advance of the Summer Associate recruiting season.

THE CREDIT SUISSE MBA FELLOWSHIP PROGRAM - FIRST YEAR MBA STUDENTS

The MBA Fellowship Program is designed to increase the level of interest in, and awareness of careers in the investment banking industry among students of color attending business school.

Credit Suisse will offer a one-year, full-tuition fellowship to top MBA students of Black and/or Hispanic heritage at the following business schools:

- Chicago Graduate School of Business
- Columbia Business School
- Cornell Johnson School of Management
- Harvard Business School
- Stern School of Business
- The Wharton School
- University of Michigan Ross School of Business

Eligible candidates must be admitted as entering first-year MBA students and be interested in pursuing a career in the investment banking industry including sales, trading, research, and investment banking.

Once selected the fellowship recipients will be assigned junior and senior mentors at the beginning of the academic year. In addition to the Fellowship, selected students have the opportunity to participate in the Summer Associate program between their first and second year of business school.

Business schools Credit Suisse recruits from

We recruit from top MBA/Undergrad programs. For more information, please visit our website: www.credit-suisse.com/standout

Investment Banking Employer Directory, cont.

Goldman, Sachs and Co.

85 Broad Street
 New York, NY 10004
 MBA Recruiting Contact: 212-902-1000
www.gs.com/careers



Goldman Sachs is a leading global investment banking, securities and investment management firm that provides a wide range of services worldwide to a substantial and diversified client base that includes corporations, financial institutions, governments and high net worth individuals. Founded in 1869, it is one of the oldest and largest investment banking firms. The firm is headquartered in New York and maintains offices in London, Frankfurt, Tokyo, Hong Kong and other major financial centers around the world. Please visit our Careers site for information about applying online and our recruiting process.

Schools Goldman recruits from

The following is a list of our primary cross-divisional target schools. The firm also hires from a number of additional schools on a divisional basis, and welcomes online applications from all business schools.

University of Chicago; Columbia University; Cornell University (Johnson); Dartmouth (Tuck); Duke University (Fuqua); Harvard University; Indiana University (Kelley); University of Michigan (Ross); MIT (Sloan); Northwestern University (Kellogg); NYU (Stern); Stanford University; University of Texas (Rice); UCLA (Anderson); University of North Carolina (Kenan-Flagler); University of Pennsylvania (Wharton), University of Virginia (Darden); Vanderbilt University (Owen); Yale University

Wachovia Corporation

301 South College Street
 Suite 4000, One Wachovia Center
 Charlotte, NC 28288
www.wachovia.com/careers



Allen & Co.

711 Fifth Avenue
 9th Floor
 New York, NY 10022
 Phone: (212) 832-8000
 Fax: (212) 832-8023

Bank of New York

1 Wall Street
 New York, NY 10286
 Tel: (212) 495-1784
 Fax: (212) 809-9528
www.bankofny.com

Bear Stearns

383 Madison Avenue
 New York, NY 10179
 Phone: (212) 272-2000
 Fax: (212) 272-4785
www.bearstearns.com

Bank of America, Global Corporate & Investment Banking Division

9 West 57th Street
 New York, NY 10019
 Phone: (212) 583-8900
 100 N. Tryon Street
 Charlotte, NC 28255
 Phone: (800) 432-1000
www.bankofamerica.com

Barclays Capital

5 The North Colonnade
 Canary Wharf
 London, E14 4BB
United Kingdom
 Phone: +44-20-7623-2323
 200 Park Avenue
 New York, NY 10166
 Phone: (212) 412-4000
www.barcap.com

The Blackstone Group

345 Park Avenue
 New York, NY 10154
 Phone: (212) 583-5000
 Fax: (212) 583-5712
www.blackstone.com

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Paris 75002
Phone: +33-1- 4014-4546
Fax: +33-1- 4014-6973
www.bnpparibas.com

Brown Brothers Harriman & Co.

140 Broadway
New York, NY 10015-1101
Phone: (212) 483-1818
Fax: (212) 493-8545
www.bbh.com

CIBC World Markets

300 Madison Avenue
New York, NY 10017
Phone: (212) 856-4000
www.cibcwm.com

Citigroup Inc.

399 Park Avenue
New York, NY 10043
Phone: (800) 285-3000
Fax: (212) 793-3946
www.citigroup.com

Cowen and Company, LLC

1221 Avenue of the Americas
New York, NY 10020
Phone: (646) 562-1000
Fax: (646) 562-1741
www.cowen.com

Deutsche Bank

60 Wall Street
New York, NY 10005
Phone: (212) 250-2500
www.db.com

Dresdner Kleinwort

1301 Avenue of the Americas
New York, NY 10019
Phone: (212) 969-2700
www.dresdnerkleinwort.com

Evercore Partners

55 East 52nd Street
43rd Floor
New York, NY 10055
Phone: (212) 857-3100
Fax: (212) 857-3101
www.evercore.com

Friedman, Billings, Ramsey Group

1001 19th Street North
Arlington, VA 22209
Phone: (703) 312-9500
Fax: (703) 312-9501
www.fbr.com

Gleacher Partners

660 Madison Avenue
19th Floor
New York, NY 10021
Phone: (212) 418-4200
Fax: (212) 752-2711
www.gleacher.com

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300 Park Avenue
New York, NY 10022
Phone: (212) 389-1500
www.greenhill-co.com

HSBC Holdings

8 Canada Square
London, UK E14 5HQ
Phone: +44-020-7991-8888
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www.hsbc.com

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1930 Century Park West
Los Angeles, CA 90067
Phone: (310) 553-8871
Fax: (310) 553-2173
www.hlhz.com

Jefferies & Company, Inc.

520 Madison Avenue
12th Floor
New York, NY 10022
Phone: (212) 284-2550
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JPMorgan

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Phone: (212) 270-6000
Fax: (212) 270-2613
www.jpmorgan.com

Keefe, Bruyette & Woods

The Equitable Building
787 Seventh Avenue, 4th Floor
New York, NY 10019
Phone: (212) 887-7777
www.kbw.com

Lazard

30 Rockefeller Plaza
New York, NY, 10020
Phone: (212) 632-6000
www.lazard.com

Lehman Brothers

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New York, NY 10019
Phone: (212) 526-7000
Fax: (212) 526-8766
www.lehman.com

Merrill Lynch

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250 Vesey Street
New York, NY 10080
Phone: (212) 449-1000
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Fax: (212) 231-1010
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www.morgankeegan.com

Morgan Stanley

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Investment Management

How many industries can you think of that impact households all over the world? Very few. That is one of the many exciting aspects of the asset management industry—more people than ever before are planning for their future financial needs, and as a result, the industry is more visible and important than ever.

Investment management vs. asset management

A quick note about the terms investment management and asset management: these terms are often used interchangeably. They refer to the same practice—the professional management of assets through investment. Investment management is used a bit more often when referring to the activity or career (i.e., “I’m an investment manager” or “That firm is gaining a lot of business in investment management”), whereas “asset management” is used more with reference to the industry itself (i.e., “The asset management industry”).

More stability

Because of the stability of cash flows generated by the industry, investment management provides a relatively stable career when compared to some other financial services positions (most notably investment banking). Investment management firms are generally paid a set fee as a percentage of assets under management. (The fee structure varies, and sometimes is both an asset-centered fee plus a performance fee, especially for institutional investors.) Still, even when investment management fees involve a performance incentive, the business is much less cyclical than cousins like investment banking. Banking fees depend on transactions. When banking activities such as IPOs and M&A transactions dry up, so do fees for investment banks, which translates into layoffs of bankers. In contrast, assets are quite simply always being invested.

History

To better understand why asset management has become such a critical component of the broader financial services industry, we must first become acquainted with its formation and history.

The beginnings of a separate industry

While the informal process of managing money has been around since the beginning of the 20th century, the industry did not begin to mature until the early 1970’s. Prior to that time, investment management was completely relationship-based. Assignments to manage assets grew out of relationships that banks and insurance companies already had with institutions—primarily companies or municipal organizations with employee pension funds—that had funds to invest. (A pension fund is set up as an employee benefit. Employers commit to a certain level of payment to retired employees each year and must manage their funds to meet these obligations. Organizations with large pools of assets to invest are called institutional investors.)

These asset managers were chosen in an unstructured way—assignments grew organically out of pre-existing relationships, rather than through a formal request for proposal and bidding process. The actual practice of investment management was also unstructured. At the time, asset managers might simply pick 50 stocks they thought were good investments—there was not nearly as much analysis on managing risk or organizing a fund around a specific category or style. (Examples of different investment categories include small cap stocks and large cap stocks. We will explore the different investment categories and styles in a later chapter.) Finally, the assets that were managed at the time were primarily pension funds. Mutual funds had yet to become broadly popular.

ERISA, 401(k) plans and specialist firms

The two catalysts for change in the industry were: 1) the broad realization that demographic trends would cause the U.S. government's retirement system (Social Security) to be underfunded, which made individuals more concerned with their retirement savings, and 2) the creation of ERISA (the Employment Retirement Income Security Act) in 1974, which gave employees incentives to save for retirement privately through 401(k) plans. (401(k) plans allow employees to save pre-tax earnings for their retirement.) These elements prompted an increased focus on long-term savings by individual investors and the formation of what can be described as a private pension fund market.

These fundamental changes created the opportunity for professional groups of money managers to form "specialist" firms to manage individual and institutional assets. Throughout the 1970s and early 1980s, these small firms specialized in one or two investment styles (for example, core equities or fixed income investing).

During this period, the investment industry became fragmented and competitive. This competition added extra dimensions to the asset management industry. Investment skills, of course, remained critical. However, relationship building and the professional presentation of money management teams also began to become significant.

The rise of the mutual fund

In the early to mid 1980s, driven by the ERISA laws, the mutual fund came into vogue. While mutual funds had been around for decades, they were only used by financially sophisticated investors who paid a lot of attention to their investments. However, investor sophistication increased with the advent of modern portfolio theory (the set of tools developed to quantitatively analyze the management of a portfolio; see sidebar on next page). Asset management firms began heavily marketing mutual funds as a safe and smart investment tool, pitching to individual investors the virtues of diversification and other benefits of investing in mutual funds. With more and more employers shifting retirement savings responsibilities from pension funds to the employees themselves, the 401(k) market grew rapidly. Consequently, consumer demand for new mutual fund products exploded (mutual funds are the preferred choice in most 401(k) portfolios). Many specialists responded by expanding their product offerings and focusing more on the marketing of their new services and capabilities.

Modern Portfolio Theory

Modern Portfolio Theory (MPT) was born in 1952 when University of Chicago economics student Harry Markowitz published his doctoral thesis, "Portfolio Selection," in the Journal of Finance. Markowitz, who won the Nobel Prize in economics in 1990 for his research and its far-reaching effects, provided the framework for what is now known as Modern Portfolio Theory. MPT quantifies the benefits of diversification, looking at how investors create portfolios in order to optimize market risk against expected returns. Markowitz, assuming all investors are risk averse, proposed that investors, when choosing a security to add to their portfolio, should not base their decision on the amount of risk that an individual security has, but rather on how that security contributes to the overall risk of the portfolio. To do this, Markowitz considered how securities move in relation to one another under similar circumstances. This is called "correlation," which measures how much two securities fluctuate in price relative to each other. Taking all this into account, investors can create "efficient portfolios," ones with the highest expected returns for a given level of risk.

Consolidation and globalization

The dominant themes of the industry in the 1990s were consolidation and globalization. As many former specialists rapidly expanded, brand recognition and advanced distribution channels (through brokers or other sales vehicles) became key success factors for asset management companies. Massive global commercial and investment banks entered the industry, taking business away from many specialist firms. Also, mutual fund rating agencies such as Lipper (founded in 1973, now a part of

Reuters) and Morningstar (founded in Chicago in 1984) increased investor awareness of portfolio performance. These rating agencies publish reports on fund performance and rate funds on scales such as Morningstar's 4-star rating system.

These factors led to a shakeout period of consolidation. From 1995 to 2001, approximately 150 mergers took place, creating well-established and formidable players such as Capital Group and Citigroup. As opposed to specialist firms, these large financial services firms provide asset management products that run the gamut: mutual funds, pension funds, management for high-net-worth individuals, etc. While many excellent specialist firms continue to operate today, they are not the driving force that they once were.

The Industry Today

Wealth creation in the 1990s has led to even greater demand for money management services today. In the U.S. alone, 2.8 million families have reached millionaire status. Mutual fund demand has continued to increase; as of 2002, there were 8,000 different funds in the market, up from just 3,000 in 1990. In fact, nearly 50 million households invest in mutual funds, with a total worth of \$8.5 trillion, up from only \$340 billion in 1984 and \$1 trillion as recently as 1990.

As the industry has matured, total assets under management (AUMs) in the United States have grown to \$20 trillion. Consolidation and globalization have created a diverse list of leading industry players that range from well-capitalized divisions of investment banks, global insurance companies and multinational commercial banks to independent behemoths, such as Fidelity and Capital Group.

Below is a list of the 20 largest worldwide asset management companies as of 2001. Pay attention to one critical component that may not be immediately obvious: the leading players in the industry are located all over the U.S. Working in the industry, unlike other areas of financial services like investment banking, does not require that you live in a particular region of the country.

Portfolio Management

The portfolio management segment of the firm makes the ultimate investment decision; it's the department that "pulls the trigger." There are three jobs that typically fall under this component of the firm: portfolio managers, associate portfolio managers and portfolio manager assistants. Recent college graduates often fill portfolio assistant positions, while individuals with many years of investment experience hold associate and senior portfolio manager assignments. MBAs are not hired as portfolio managers right out of business school unless they have a ton of experience. Typically, MBAs who wish to pursue a career in portfolio management join investment management firms in their investment research divisions. After two years in research, MBAs will then have a choice: either stay in research or leverage their research experience to move into an associate portfolio manager position.

Senior portfolio manager

Portfolio managers are responsible for establishing an investment strategy, selecting appropriate investments and allocating each investment properly. All day long, portfolio managers are presented with investment ideas from internal buy-side analysts and sell-side analysts from investment banks. It is their job to sift through the relevant information and use their judgment to buy and sell securities. Throughout each day, they read reports, talk to company managers and monitor industry and economic trends looking for the right company and time to invest the portfolio's capital.

The selection of investments must adhere to the style of the portfolio. For instance, a large-capitalization growth manager might be screening for only companies that have a market-capitalization in excess of \$3 billion and earnings growth

characteristics that exceed its industry. Therefore, the portfolio manager would not even consider a \$500 million utility stock with a 6 percent dividend yield.

Associate portfolio manager

The associate portfolio manager position requires an MBA, CFA or considerable investment experience. Typically, the job is filled by successful research analysts who have at least 3 to 5 years of post-MBA experience. The job itself is very similar to that of the senior portfolio manager with one main exception: associates interact less with clients than senior managers do. Associate portfolio managers are usually assigned smaller, less sophisticated portfolios to manage or serve as lieutenants on large, complicated portfolios.

The role of the associate portfolio manager differs depending on which segment of the market is being served—mutual fund, institutional or high-net-worth. For instance, associate portfolio managers at many mutual fund firms will either act as the lead investor on a sector fund or as second-in-command on a large diversified fund. Depending on the firm, an associate could also act as a lead on a sector fund and a second-in-command on a diversified fund at the same time. Alternatively, on the institutional side, associate portfolio managers typically apprentice with seasoned portfolio managers on the largest and most complicated portfolios. After they have succeeded in that role, the firm will assign them smaller institutional accounts to manage on their own.

Successful associate portfolio managers will usually be promoted to senior portfolio managers within 2 to 5 years.

Investment Research

The investment research segment is responsible for generating recommendations to portfolio managers on companies and industries that they follow. Similar to the portfolio management segment, there are three potential positions: senior research analyst, investment research associate and investment research assistant. Senior research analysts typically have 2 to 4 years of post-MBA research experience. Research associates are usually recent MBA graduates, while assistants are recent college graduates.

Senior research analyst

Senior research analysts are investment experts in their given industry focus. An equity analyst covers stocks; a fixed income analyst covers bonds.

Their role is to predict the investment potential of the companies in their sector. For instance, take an equity analyst covering computer hardware companies, including Apple Computer. The analyst would be responsible for predicting Apple's future earnings and cash flow, and comparing the fair value of Apple to the expectations of the stock market. To do this, the analyst would build a financial model that included all of the potential variables to derive Apple's earnings and appropriate value (e.g., sales growth and business costs, as well as research and development).

A fixed income analyst focusing on telecom, for example, might be looking at a new high-yield corporate bond issued by Qwest. The main thing the analyst will be looking for is Qwest's ability to pay off that loan—the amount of the bond. The analyst will look at historical cash flows, project future cash flows and look at other debt obligations that might be more senior to the new bond. This will tell the analyst the likelihood that Qwest will be able to pay off the bond.

Analysts spend a considerable amount of time attending industry conferences, meeting with company management and analyzing industry supply and demand trends to derive business forecasts. Many analysts follow 20 to 30 companies and must be an expert on each.

An important part of a senior research analyst's job is to convey their recommendations to the portfolio management teams. Therefore, senior analysts spend considerable time presenting to portfolio managers and issuing investment reports. Because of this, senior research analysts must be articulate and persuasive in their convictions in order to earn respect within the firm.

Senior research analysts typically have served as investment research associates for two to four years, post MBA or CFA, before assuming their position. If successful in their role, many senior analysts move into portfolio management roles later in their careers.

Investment research associate

This is the role for most MBAs or those with equivalent experience. Essentially, investment research associates have the same responsibilities as senior research analysts with one exception: associates are given smaller industries to follow. Typically, the industry assigned to an associate is a component of a broader sector that is already being analyzed by a senior analyst. For instance, a research associate might be assigned HMOs and work closely with the senior analyst in charge of insurance companies.

The associate analyst creates investment recommendations in the same manner as a senior analyst. In general, new associates spend several weeks familiarizing themselves with their industry by reading industry papers, journals and textbooks, and attending industry conferences. A large percentage of a research analyst's time is spent monitoring industry and company trends to predict financial results for the company. Therefore, research associates are constantly speaking with management, customers and suppliers to gauge the current status of the company they are analyzing. Armed with financial models and fundamental company analysis, they develop investment recommendations that they distribute to the firm's portfolio managers.

One of the greatest challenges for a new associate is the steepness of the learning curve. Portfolio managers don't have the patience or the luxury to allow an analyst to be uninformed or consistently incorrect. New associates work extremely hard building trust with portfolio managers.

Obviously, financial acumen and quantitative skills are a must for a research associate, but communication skills are also critical. Research associates need to be able to clearly and persuasively communicate their investment recommendations. These associates must also be able to respond to detailed inquiries from portfolio managers that challenge their ideas—which requires a strong tact and a great deal of patience. Furthermore, associates need to be energetic, diligent and intellectually curious.

Research associates are usually promoted to larger industries within two to four years of joining the firm.

This section was excerpted from the *Vault Career Guide to Investment Management*. Get the inside scoop on on investment management careers:

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Management Consulting

What is Consulting?

A giant industry, a moving target

Consulting, in the business context, means the giving of advice for pay. Consultants offer their advice and skill in solving problems, and are hired by companies who need the expertise and outside perspective that consultants possess. Some consulting firms specialize in giving advice on management and strategy, while others are known as technology specialists. Some concentrate on a specific industry area, like financial services or retail, and still others are more like gigantic one-stop shops with divisions that dispense advice on everything from top-level strategy, to choosing training software, to saving money on paper clips.

But consulting firms have one thing in common: they run on the power of their people. The only product consulting firms ultimately have to offer is their ability to make problems go away. As a consultant, you are that problem-solver.

Not the kind of consulting we mean

As a standalone term, “consulting” lacks real meaning. In a sense, everyone’s a consultant. Have you ever been asked by a friend, “Do I look good in orange?” Then you’ve been consulted about your color sense. There are thousands upon thousands of independent consultants who peddle their expertise and advice on everything from retrieving data from computers to cat astrology. There are also fashion consultants, image consultants, and wedding consultants. For the purposes of this section, we are going to use the term “consulting” to refer specifically to management consulting.

Management consulting firms sell business advisory services to the leaders of corporations, governments, and non-profit organizations. Typical concentrations in consulting include strategy, IT, HR, finance, and operations. Types of problems in consulting include pricing, marketing, new product strategy, IT implementation, or government policy. Finally, consulting firms sell services in virtually any industry, such as pharmaceuticals, consumer packaged goods, or energy.

Firms can be organized or broken up according to topic, type of problem, or industry. For example, a firm might focus on strategy problems only, but in virtually any industry. Bain & Company is an example of one such firm. Another firm might focus on a specific industry, but advise on nearly any type of issue. Oliver, Wyman and Company, which focuses on the financial services industry, is an example of this type of firm. Many of the larger firms have a “matrix” organization, with industry practice groups but also functional practice groups. And some firms are extremely specialized. For example, a firm might have only two employees, both focusing solely on competitive analysis in the telecommunications industry. All of these are examples of management consulting.

Caveats about consulting

All this might sound great, but before we go on, we should address some common misconceptions about consulting.

- **Implementation** – You might be thinking, “All consultants do is figure out problems at companies and explain them. Awesome. I’m going to be making great money for doing something really easy.” Unfortunately, that’s not true. Spotting a client’s problems is a mere fraction of the battle. (Most people with a fair amount of common sense and an outsider’s perspective can identify a client’s problems. And in many cases, clients also understand where the problems lie.)

The job of the consultant, therefore, isn’t just about knowing what’s wrong. It’s about figuring out how to make it right. Even finding the solution isn’t the end of the story. Consultants must make sure the solution isn’t too expensive or impractical to implement. (Many consulting firms have what’s called an 80 percent rule: It’s better to put in place

a solution that takes care of 80 percent of the problem than to strive for a perfect solution that can't be put into place.) A corollary to this is the 80/20 rule: 80 percent of a problem can be solved in 20 percent of the time. Consultants must also get buy-in from the clients. Not only does bureaucracy often make implementation tough, but consultants must also convince individual client employees to help them make solutions work. It's tough to solve problems—and that's why clients hire consultants.

- **Glamour** – Consulting can indeed be exciting and high profile, but this is the exception, not the rule. Chances are, you won't be sitting across from the CEO at your next project kick-off, and you probably won't be staying in four-star hotels in the coolest cities in the world (though both are possible). Depending on the industry and location of your client's business, your environment might be a mid-range hotel in a small city, and you might be working with the senior vice president of one of the company's many business units.
- **Prestige** – Consulting is widely thought of as a prestigious career among business circles, particularly MBAs. But you should realize that in contrast to work in investment banking, your work in consulting will probably never get mentioned in The Wall Street Journal. Very few consulting firms are publicly recognized for the help they give.

As a result, few people outside of the industry really understand what consulting is. In fact, a running joke about consulting is that no one can explain it, no matter how hard or many times one tries. If you want a job you can explain to your grandmother, consulting isn't for you. Most "civilians" won't have heard of your firm—unless it has been involved in a scandal, that is.

- **Income** – The salary looks attractive on paper, but remember, it's not easy money. Divide your salary over the (large) number of hours, and the pay per hour isn't much better than other business careers.

So what does a consultant actually do, anyway?

Most "non-consultants" are mystified by the actual job and its day-to-day responsibilities. There are good reasons why this is so. While you're used to giving advice and solving problems, you may not understand how this translates into a career path. The problem is compounded because consultants tend to use a very distinctive vocabulary. You may not know what your skill set is, or how not to boil the ocean, or what the heck consultants mean when they talk about helicoptering. In addition, many consulting firms have their own specific philosophies and problem-attacking frameworks, which only raise the level of jargon.

The short answer is that you will be working on projects of varying lengths at varying sites for different clients. What you do will depend on your seniority, experience, phase of the project and your company. If you are a partner, you are selling work most of the time, whereas if you have a recent MBA degree, you are probably overseeing a couple of entry-level consultants doing research. For the most part, we'll describe the job that entry-level and mid-level (MBA or the equivalent) consultants do. Generally, projects follow the pitching/research/analysis/report writing cycle.

Depending where you are in the project lifecycle, here are some of the things you could be doing:

Pitching

- Helping to sell and market the firm (preparing documents and researching prospective clients in preparation for sales calls)
- Helping to write the proposal
- Presenting a sales pitch to a prospective client (usually with PowerPoint, Microsoft's presentation software)

Research

- Performing secondary research on the client and its industry using investment banking reports and other research sources (these include Bloomberg, OneSource, Hoover's Online, Yahoo! News and SEC filings)
- Interviewing the client's customers to gather viewpoints on the company

- Checking your firm's data banks for previous studies that it has done in the industry or with the client, and speaking to the project leads about their insights on the firm
- Facilitating a weekly client team discussion about the client company's business issues

Analysis

- Building Excel discounted cash flow (DCF) and/or other quantitative financial models
- Analyzing the gathered data and the model for insights
- Helping to generate recommendations

Reporting

- Preparing the final presentation (typically a “deck” of PowerPoint slides, though some firms write up longer reports in Microsoft Word format)
- Helping to present the findings and recommendations to the client

Implementation

- Acting as a project manager for the implementation of your strategy, if your firm is typically active during the implementation phase of a project
- Executing the coding, systems integration, and testing of the recommended system, if you work for an IT consulting practice
- Documenting the team's work after the project is over

Administration

- Working on internal company research when your firm has no projects for you. (Being unstaffed is referred to as being “on the beach,” a pleasant name for what is often a tedious time.)
- Filling out weekly time tracking and expense reports

Keep in mind that the analysis phase—usually the most interesting part—is probably the shortest part of any assignment. Consultants staffed on projects typically do a lot of research, financial analysis, Excel model building and presentation. You will attend lots of meetings in your quest to find the data, create the process and meet the people who will help you resolve the issues you've been hired to address. And, when you're not staffed, you will spend time “on the beach” doing research on prospective clients and helping with marketing efforts. (It's called “on the beach” because the time when you're not staffed on a paid engagement is usually less frenetic—though not always so!) Consulting firms spend a lot of time acquiring the work, and depending on how the firm is structured or how the economy is doing, you could spend significant amounts of time working on proposals. For you, this usually means lots of research, which is then elucidated on the omnipresent PowerPoint slides.

To some extent, though, the boundaries of the job are virtually limitless. Each project carries with it a new task, a new spreadsheet configuration, a new type of sales conference, or an entirely new way of thinking about business. To top it all off, you often must travel to your work assignment and work long hours in a pressurized environment. It's not easy.

Consulting Skill Sets

Consultants focus their energies in a wide variety of practice areas and industries. Their individual jobs, from a macro level, are as different as one could imagine. While a supply chain consultant advises a client about lead times in their production facility, another consultant is creating a training protocol for a new software package. What could be more different?

Despite the big picture differences, however, consultants' day-to-day skill sets are, by necessity, very similar. (Before we go any further: by skill set, we mean "your desirable attributes and skills that contribute value as a consultant." Skill set is a handy, abbreviated way to refer to same.)

Before we talk about the skill sets, keep in mind that there is a big difference between the job now and the job six to eight years from now, if and when you are a partner. We are going to talk about whether you would like the job now, but you should think about whether this might be a good long-term career for you. Is your goal to see it through to partner? If you would rather have an interesting job for six years, you just have to know you have the qualities to be a good consultant and manager. To be a partner, you have to be a persuasive salesperson. You will spend nearly 100 percent of your time selling expensive services to companies who don't think they need help. Your pay and job security will depend on your ability to make those sales.

Do you have the following characteristics in your skill set?

- **Do you work well in teams?** Consultants don't work alone. Not only do they frequently brainstorm with other consultants, but they also often work with employees at the client company, or even with consultants from other companies hired by the client. Consultants also frequently attend meetings and interview potential information sources. If you're the sort of person who prefers to work alone in quiet environments, you will not enjoy being a consultant.
- **Do you multi-task well?** Not only can consulting assignments be frenetic, but consultants are often staffed on more than one assignment. Superior organizational skills and a good sense of prioritization are your friends. Would your friends describe you as a really busy person who's involved in a ton of activities, and still able to keep your personal life on track?
- **Speaking of friends, do you like talking to people?** Do you find yourself getting into interesting conversations over lunch and dinner? If you consider yourself a true introvert and find that speaking to people all day saps your energy, you will likely find consulting quite enervating. On the other hand, if you truly relish meetings, talking to experts, explaining your viewpoints, cajoling others to cooperate with you and making impromptu presentations, you've got some valuable talents in your consulting skill set.
- **Did you love school?** Did you really like going to class and doing your homework? There's a high correlation between academic curiosity and enjoyment of consulting.
- **Are you comfortable with math?** Consulting firms don't expect you to be a math professor, but you should be comfortable with figures, as well as commonly used programs like Excel, Access and PowerPoint. If you hate math, you will hate consulting. On a related note, you should also relish and be good at analysis and thinking creatively. Consultants have a term, now infiltrating popular culture, called "out of the box thinking." This means the ability to find solutions that are "outside of the box"—not constrained by commonly accepted facts.
- **Are you willing to work 70, even 80 hours a week?** Consultants must fulfill client expectations. If you must work 80 hours a week to meet client expectations, then that will be your fate. If you have commitments outside work, for example, you may find consulting hours difficult. Even if you have no major commitments outside work, understand what such a schedule means to you. Try working from 8 a.m. to 10 p.m. one day. Now imagine doing so five days a week for months on end.
- **Last, but certainly not least, are you willing to travel frequently?** Be truthful. If you can't answer most of these points with a resounding "yes," consulting is most likely not for you. The point is not just to get the job, but also to know what you're getting into—and to truly want to be a consultant. (See the next section for a discussion of travel in consulting.)

The Traveling Salesman Problem

A lot of people go into the consulting field with the notion that travel is fun. “Traveling four days a week? No problem! My last vacation to Italy was a blast!” However, many soon find the traveling consultant’s life to be a nightmare. Many consultants leave the field solely because of travel requirements.

Here’s what we mean by consulting travel. Different consulting firms have different travel models, but there are two basic ones:

- A number of consulting firms (the larger ones) spend four days on the client site. This means traveling to the destination city Monday morning, spending three nights in a hotel near the client site, and flying home late Thursday night. (This will, of course, vary, depending on client preference and flight times.) The same firms often try to staff “regionally” to reduce flying time for consultants.
- The other popular travel model is to go to the client site “as needed.” This generally means traveling at the beginning of the project for a few days, at the end of the project for the presentation, and a couple of times during the project. There is less regularity and predictability with this travel model, but there is also less overall time on the road.

Here are some variations of these travel modes that pop up frequently:

- International projects involve a longer-term stay on the client site. (Flying consultants to and from the home country every week can get expensive.) For example, the consultant might stay two or three weeks on or near the client site (the client might put you up in a corporate apartment instead of a hotel to save costs) and then go home for a week, repeating the process until the end of the project.
- Then, there is the “local” project that is really a long commute into a suburb, sometimes involving up to two hours in a car. Examples of this include consulting to Motorola (based in not-so-convenient Schaumburg, IL) while living in Chicago, or consulting to a Silicon Valley client while living in San Francisco. In these cases, you might opt to stay at a local hotel after working late, instead of taking the long drive home. This is not very different from non-local travel, and it can be more grueling, due to the car commute.

You need to ask yourself a number of questions to see if you are travel-phobic. For example, when you pack to go on vacation, do you stress about it? Do you always underpack or overpack? Do you hate flying? Do you hate to drive? Do you mind sleeping in hotel rooms for long periods of time? Are you comfortable with the idea of traveling to remote cities and staying there for three or four nights every week for ten weeks? If you’re married, do you mind being away from your spouse (and children if you have them) for up to three nights a week? Does your family mind? Will your spouse understand and not hold it against you if you have to cancel your anniversary dinner because the client wants you to stay a day later? If you and your spouse both travel for work, who will take care of the pets? Does the idea of managing your weekly finances and to-do lists from the road bother you?

If these questions make your stomach churn, look for consulting companies that promise a more stable work environment. For example, if you work in financial consulting and live in New York City, most of your clients may be local. But because consulting firms don’t always have the luxury of choosing their clients, they can’t guarantee that you won’t travel. Moreover, many large companies build their corporate campus where they can find cost-effective space, often in the suburbs or large corporate parks. (If you absolutely can not travel, some of the largest consulting firms, such as Accenture, have certain business units that can guarantee a non-traveling schedule. Ask.)

Note that travel is common in the consulting field, but not all consultants travel. And not all clients expect you to be on site all the time. It absolutely depends on the firm’s travel model, industry, your location, and most importantly, your project.

A Day in the Life: Associate Strategy Consultant

Greg Schneider is an associate at the Boston office of a top strategy consulting firm office. He kindly agreed to share a “typical” workday with Vault, noting that no day at any consulting firm can be called typical.

6:15 a.m.: Alarm goes off. I wake up asking myself why I put “run three times per week” into the team charter. I meet another member of the team, and we hobble out for a jog. At least it’s warm out—another advantage of having a project in Miami.

7:15 a.m.: Check voice mail. Someone in London wants a copy of my knowledge building document on managing hypergrowth. A co-worker is looking for information about what the partner from my last team is like to work with.

7:30 a.m.: Breakfast with the team. We discuss sports, Letterman, and a morning meeting we have with the client team (not necessarily in that order). We then head out to the client.

9:00 a.m.: Meet with the client team. We’ve got an important progress review with the CEO next week, so there’s a lot going on. We’re helping the client to assess the market potential of an emerging technology. Today’s meeting concerns what kind of presentation would be most effective, although we have trouble staying off tangents about the various analyses that we’ve all been working on. The discussion is complicated by the fact that some key data is not yet available. We elect to go with a computer-based slide show and begin the debate on the content.

10:53 a.m.: Check voice mail. The office is looking for an interviewer for the Harvard Business School hell weekend. The partner will be arriving in time for dinner and wants to meet to discuss the progress review. A headhunter looking for a divisional VP. My wife reminding me to mail off the insurance forms.

11:00 a.m.: I depart with my teammate for an interview. We meet with an industry expert (a professor from a local university) to discuss industry trends and in particular what the prospects are for the type of technology we’re looking at. As this is the last interview we plan to do, we are able to check many of our hypotheses. The woman is amazing—we luck out and get some data we need. The bad news is, now we have to figure out what it means.

12:28 p.m.: As I walk back in to the client, a division head I’ve been working with grabs me and we head to lunch. He wanted to discuss an analysis he’d given me some information for, and in the process I get some interesting perspectives about the difficulties in moving the technology into full production and how much it could cost.

1:30 p.m.: I jump on a quick conference call about an internal knowledge building project I’m working on for the marketing practice. I successfully avoid taking on any additional responsibility.

2:04 p.m.: Begin to work through new data. After discussing the plan of attack with the engagement manager, I dive in. It’s a very busy afternoon, but the data is great. I get a couple “a-ha”s—always a good feeling.

3:00 p.m.: Short call with someone from Legal to get an update on the patent search.

6:00 p.m.: Team meeting. The engagement manager pulls the team together to check progress on various fronts and debate some issues prior to heading to dinner with the partner. A quick poll determines that Italian food wins—we leave a voice mail with the details.

6:35 p.m.: Call home and check in with the family. Confirm plans for weekend trip to Vermont. Apologize for forgetting to mail the insurance forms.

7:15 p.m.: The team packs up and heads out to dinner. We meet the partner at the restaurant and have a productive (and calorific) meal working through our plans for the progress review, the new data, what’s going on with the client team, and other areas of interest. She suggests some additional uses for the new data, adds her take on our debates, and agrees to raise a couple issues with the CFO, whom she’s known for years. She takes a copy of our draft presentation to read after dinner.

9:15 p.m.: Return to hotel. Plug in computer and check e-mail, since I hadn't had a chance all day. While I'm logged in, I download two documents I need from the company database, check the Red Sox score, and see how the client's stock did.

10:10 p.m.: Pre-sleep voice mail check. A client from a previous study is looking for one of the appendices, since he lost his copy. The server will be down for an hour tomorrow night.

10:30 p.m.: Watch SportsCenter instead of going right to sleep, as I know I probably should.

Note: Had this been an in-town study, the following things would have been different: I wouldn't have run with another member of my team, and we'd have substituted a conference call for the dinner meeting, so we could go home instead. Also, I probably wouldn't have watched SportsCenter.

Q&A: Heather Eberle, Deutsche Post WorldNet Inhouse Consulting

Before attending Thunderbird, the Garvin School of International Management, Heather Eberle worked as an external consultant. Once at business school, she focused her job search on lesser known internal consulting opportunities. After graduating in February 2006, she joined the Inhouse Consulting division of international shipping giant Deutsche Post WorldNet (DPWN). She spoke with Vault about her experience with internal consulting at DPWN, especially in light of her previous experience as an external consultant.

Vault: Tell me about your background prior to getting your MBA.

Eberle: I was in consulting for five years at a smaller HRIS/strategy implementation firm.

Vault: So when you went to get your MBA, were you specifically looking for internal consulting positions?

Eberle: Yes, consulting or operations. Internal consulting had always appealed to me because it seemed like the work/life balance was better than the external consulting opportunities.

With external consulting, the travel is difficult. Maybe you are home on a Thursday night, but then leave Sunday night- every week. You are lucky if you get 48 hours at your house every week.

Vault: How did you find the position at DPWN?

Eberle: Alumni recruiting at school. We also had alumni postings for other in-house consulting positions which opened my eyes to the size and scope of this job market. In my experience, these in-house jobs were often referred to as "in-house consulting" or "strategic projects group" along with some other key phrases. PMOs—project management organizations—which plan and manage projects are also an option and can be similar to consulting organizations.

Vault: How large is the DPWN InHouse Consulting group?

Eberle: In total around 150 people with about 20 each in our Fort Lauderdale and Singapore offices and the remainder in Bonn, Germany.

There is quite a bit of movement between offices as projects change. The organization is large enough to accommodate those who choose not to travel, but offers the opportunity for those who would like to work in another office. In addition, because of the Group's worldwide footprint, there are project opportunities in many different countries and regions.

The consulting practice started in 1999 in Germany and the U.S. group was incorporated a year ago. We just returned from the annual InHouse Consulting conference in Germany where one of the main goals was to build up the ties between the groups and networking.

Vault: Is it mostly MBAs or also undergrad analysts?

Eberle: Mostly MBAs.

Vault: How does the work at DPWN compare to your previous experience in consulting?

Eberle: I would say that it is pretty similar to what you would expect with respect to the typical consulting engagement- all projects differ based on client needs.

Within DPWN there are organizational strategy projects that last six to nine months, operations projects that last three months and incremental improvement projects that last a month or two such as sales force optimization. It all depends on the scope of the project.

Vault: How is staffing done?

Eberle: Staffing is based on availability and skill set. DPWN probably does a better job than some external consultancies, which have a tendency to move consultants around frequently. At DPWN you would not be pulled off your project and moved to a new project unless you have some very specific expertise that is needed and unavailable elsewhere within the group.

Vault: So who are your “clients” when you’re working on an engagement?

Eberle: We only accept projects that are sponsored by a member of the management board. However, the client may be a director, SVP or EVP with P&L ownership. In these cases we add them into the discussion regarding the consulting approach InHouse Consulting will employ. If there is no agreement, we decline to take the project.

Vault: And how are the projects requested? Or is it that they’re not requested but that the CEO or some other high level manager wants your group to go in and work with a group?

Eberle: In many cases, the business is requesting assistance either because they lack the project expertise or need someone from outside their department who is better able to identify key issues or manage pressure from disparate stakeholders.

In other cases, we identify a business issue that appears to be similar to another project we have worked on. If we felt that the methodology and expertise of InHouse Consulting could help the business, we would prepare a proposal- however, this is less common.

Vault: And so it’s not often that it’s because of poor performance that you’re there and they don’t actually want you to be there?

Eberle: I think that it is less the case that the business does not want us to be there for two reasons. One, InHouse Consulting does not engage in projects that are unlikely to secure buy-in and therefore success. Two, as DPWN employees our goal is to increase the success of the Group- not get paid a fat bonus for a solution that won’t work, and I think others in the business recognize this.

This is reflected in the amount of information you can get regarding the problem and solutions. I have found that it is really fun to get into the nitty-gritty because it is much more challenging to say here’s 10 general best-practice recommendations versus here’s 10 extremely detailed recommendations you can begin implementing tomorrow.

Vault: Why are you able to get into more detail?

Eberle: Because we are part of the company, there is zero likelihood we, as a consulting group, would data mine information from one project and use it for a competitor’s project. For example, the five-year strategic operations roadmap for a business is not going to be shared with other consulting groups due to security concerns. By having access to the roadmap we may find out about an acquisition target that would change our recommendations.

The other great thing about InHouse Consulting is all the specialized knowledge we have within the group. It is enormously helpful to have a network to rely on if you have a question about anything logistics related. If you worked at an outside

consulting firm unless you had a large logistics practice, it could take you days to come up with answers to some of the specialized logistics questions.

At Inhouse Consulting everyone is extremely supportive and friendly. The best part is that we all work together, working towards the same goal of increasing the organizational effectiveness of DPWN. I didn't always get that feeling as an external consultant.

Vault: What sort of projects have you worked on?

Eberle: I worked on a project investigating market opportunities which was great fun. I have worked on project working on sales force optimization and I am currently on a project looking at finance and accounting. The projects are quite different but each has been very interesting.

Vault: Were all these projects in Florida?

Eberle: They were all based in Fort Lauderdale but have included components from all regions of the world. The great thing about DPWN is that every project has a high degree of internationalization to it.

Vault: What are your hours like?

Eberle: Usually, 9 to 7. The group generally does not work weekends, which has been nice. There may be some travel, but it is not the weekly grind and usually you get to come home to sleep in your own bed—which means you are pretty much guaranteed to get a good night's sleep.

Vault: What are some other advantages of in-house consulting versus external consulting?

Eberle: One of the key advantages is that many in-house consulting groups have strong ties within the management level of the organization which often allows for movement directly from the consulting group into the management track.

In this respect in-house consulting is similar to project based management development programs, but in-house consulting groups typically have a higher degree of project diversity. Because you have worked on projects for a variety of functions within the organization, you can often follow an accelerated career path.

In-house consulting also allows you to build a really strong network due to the number of clients you work with. With external consulting, while there are opportunities to join the companies you're consulting with, you probably don't have experience working with a number of functions within the client organization.

This section was excerpted from the *Vault Career Guide to Consulting*. Get the inside scoop on on management and strategy consulting careers with:

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Manufacturing

The Engine Driving the Economy

This engine's humming right along

America's manufacturing industry is a powerful engine driving the nation's economy, making up 11 percent of employment and 12 percent of the US gross domestic product (GDP) in 2005. In the past decade, the industry contributed 22 percent of the country's economic growth, or 28 percent with the addition of software production. Through a phenomenon known as the multiplier effect, manufacturing actually creates economic output in other industries by using intermediate goods and services in its production process—so that, according to the Department of Commerce, every \$1 of a manufacturing product sold to a final user creates an additional \$1.43 in intermediate economic output. The U.S. continues to lead the world in many manufacturing sectors, including automobiles, aerospace, steel, telecommunications and consumer goods; it also maintains the lead in exports of manufactured products. Manufacturing and exporting goods is critical to maintaining a strong currency and economy, so it's no wonder economists pay close attention to manufacturing stats and figures.

Beginning in 2000, following a boom that spanned most of the 20th century, manufacturing employment has been declining, most sharply during the 2001-2003 economic downturn. Despite the economy's general resurgence from 2003 to 2005, industry employment has, according to the Bureau of Labor Statistics (BLS), only begun to level off. A number of circumstances led to the slump, including increased oil and energy prices, more efficient and less manpower-intensive production methods (productivity increased 5 percent between 2004 and 2005) and a strong U.S. dollar, which weakened the export trade.

Auto manufacturing for the people

Manufacturing has long been closely tied to automobile production—indeed, a Michigan assembly line may be what many people think of when they hear the word “manufacturing.” In 2004, the latest year for which BLS data is available, the auto sector accounted for about 1.1 million jobs. For the most part, the U.S. was able to ward off the competitive threat from Japanese companies that surfaced in the early 1990s by improving product line quality domestically—though a bullish Wall Street environment and Asian economic weakness also helped. The so-called “Big Three” automakers—General Motors, DaimlerChrysler and Ford—claimed about 57 percent of the U.S. passenger car market in 2005, though American-made staples like the Ford Excursion and Chevy Tahoe have witnessed an ongoing decline in sales of nearly 20 percent for the first half of 2005. The main culprits in the auto industry slump include the rise in gas prices to record-high levels per gallon and the rapidly increasing price of steel per ton, which, according to data from *Purchase* magazine, more than doubled from \$260 in May 2003 to \$535 in May 2005.

Since big-ticket purchases like cars are closely tied to consumer confidence, the terrorist attacks of September 11 and the resulting economic turmoil forced carmakers to offer customers heavy discounts (such as the zero-percent financing campaign initiated by GM) and cash-back incentives to keep inventory moving. In the summer of 2005, the Big Three even announced promotions to offer vehicles at the same rate employees pay, thousands of dollars below the sticker price, to boost lagging sales. Capacity has also been slashed to bring inventories in line with reduced demand, leading to an unhealthy combination of diminished productivity and weak prices. All of this has led to major job cuts, as well as negative ripple effects for related sectors like steel companies.

Though the auto industry has attempted to rebound by revamping cars to meet consumer demand for items like SUVs and, in contrast, fuel-efficient hybrid vehicles, analysts warn that U.S. companies need to look to the East again as Asian markets improve and manufacturers like Toyota and Honda pick up the pace. To pique public interest, automotive companies are increasingly combining with major electronics manufacturers to provide a variety of in-vehicle add-ons like satellite radio,

crash avoidance systems and iPods; the percentage of electronic content in automobiles is expected to increase to 40 percent by 2010. At the same time, though, such developments also increase automotive warranty costs and vehicle recalls.

Vehicle manufacturing is also coming from a new source—automakers such as BMW, Honda, Hyundai and Toyota have moved manufacturing plants to the Southeast U.S. In the past 20 years, these companies have quietly cut down on imports and increased domestic production by seven times—in fact, 2005 was the first year that Japanese carmakers made more cars abroad than domestically. The Association of International Automobile Manufacturers estimates that by 2009 these foreign automakers will have invested \$3.3 billion and have hired 10,000 additional workers. Despite this, according to Ward's, auto production in the light vehicle category is down 3 percent from 2005.

Steely resolve

Steel, demand for which has been bolstered by the developing economies of India and China (which was responsible for 30 percent of the world's demand in 2005), is another U.S. manufacturing mainstay. In addition, the destruction caused by hurricanes Katrina and Rita destroyed many steel structures in the Southeast, such as bridges, barges and oil rigs, which need to be replaced or extensively repaired. The steel market hasn't always been so strong, however. Prices in 2002 were low, with seven companies controlling nearly half of American steel production. A spate of bankruptcies and acquisitions, along with rising prices and increased efficiency, revived the industry. According to Roland Berger Strategy Consultants, steel prices have increased more than 150 percent between 2003 and 2005. Now, three companies—Mittal, U.S. Steel and Nucor—supply 55 percent of the American steel market.

All roads lead to tech

Electronics manufacturing covers companies engaged in manufacturing, among other things, power distribution equipment, communications devices, semiconductors, industrial electronics and household appliances. Above all, the sector plays a vital role in a number of other industries, including telecommunications, medical and automotive; electronics demand is thus inextricably tied to the rise and fall of dependent industries. Innovative new consumer products and advancing digital technology are also opening up new markets and avenues of revenue. Despite this, the BLS expects that employment in this sector will decrease by 7 percent over the 2004-2014 period due to increased efficiency and jobs being moved overseas.

Flying the friendly skies

Aerospace also contributes significantly to U.S. manufacturing. In the commercial sphere, airplane manufacturing is dominated by Boeing and European rival Airbus. These companies and others, like Lockheed Martin, Northrop Grumman and Raytheon, also are involved in the production of military aircraft, missiles and space equipment. The commercial airline sector saw a severe downturn following September 11, but the past few years have seen a rebound. By the end of 2004, aerospace sales, orders, exports and employment had all increased significantly. The trend continued in 2005 with increases across all sectors of the industry, according to the Aerospace Industries Association (AIA). Sales increased 9.2 percent in 2005, and the AIA's predictions for 2006 are healthy. The BLS expects the airline manufacturing sector to grow by 8 percent over from 2004 to 2014.

Manu's got a chemical love

Chemical manufacturing is an important segment of the manufacturing industry, producing solvents, dyes, soaps, bleaches and plastics for use in factories and at home. The hurricanes of 2004 and 2005 hurt this segment by destroying a number of factories in the Southeast, and high oil prices drove up the cost of many petrochemical-derived products. This has resulted in decreased revenues along with an increased drive toward mergers and acquisitions. Notable deals include Dow Chemical's

purchase of Union Carbide and Valspar's purchase of Lilly Industries. One area of chemical manufacturing that is picking up steam is the specialty chemicals sector, which has been boosted by the recent strength of the housing market. Nevertheless, the BLS expects employment within the chemical manufacturing segment of the manufacturing industry to decline by 14 percent between 2004 and 2014, due to increased efficiency, production outsourcing and more stringent regulation, among other factors.

Manufacturing grab-bag

Other manufacturing sectors include plastics, textiles, apparel, rubber, minerals and forestry, which holds claim to roughly 7 percent of all U.S. manufacturing output. Here again, employment figures have plummeted in recent years due to a convergence of unfavorable economic conditions and changes in demand due to the new "paperless" business environment as well as manufacturing techniques for furniture and cabinetry that use less wood. But the industry currently is expecting solid profits due to the increasing demand for lumber that's being driven by the rise in housing and construction activity, especially in the hurricane-damaged Southeast. The good news may not last long, though: a softening housing market would lead to a decline in demand for lumber. Additionally, environmentalists have come out swinging against the industry in recent years, primarily through campaigns to protect old growth forests.

A shifting—but optimistic—outlook

Like many industries, manufacturing has seen a steady push toward technologies that promise greater efficiency and productivity while reducing the need for manpower. It's likely that many of the factory jobs lost since the beginning of the century will never return, signaling a fundamental shift in the industry as a whole. The BLS predicts total manufacturing employment will decrease by 0.6 percent through 2014. Statistics from the Labor Department released in July 2005 showed a decline in manufacturing jobs for the fourth straight month, leaving employment at 14.27 million—a 55-year low. Motor vehicle production accounted for 18,000 of 24,000 jobs lost overall that June.

A shift also has taken place in the makeup of the industry. According to the National Association of Manufacturers (NAM), chemicals, industrial machinery and equipment, and electronics are the three largest manufacturing sectors today, making up a third of the industry's gross domestic product. Fifty years ago, the three largest sectors were food, primary metals and motor vehicles.

But despite the impression of general decline the industry might give, the job market is remarkably vibrant. According to a 2005 survey done by Deloitte with NAM, 90 percent of employers in the industry reported a demand for skilled workers, and 65 percent needed scientists and engineers. The manufacturing job market should also continue to move in the job seeker's favor as members of the Baby Boom generation begin to retire.

What is the Supply Chain?

Suppliers and vendors

A simple definition of supply chain is the network of vendors that provides materials for a company's products, but in reality, the supply chain is more complicated. There is a stream of flows from supplier to supplier until a product reaches an end user. For example, oil is rigged from the ground, sent to a refinery, plastic is made, an injection molding shop buys plastic pellets, makes plastics components, ships the components to a customer, the customer assembles the plastic parts into their machine, and then sells the machine to their customer. The further away from the customer, the farther "upstream" a supplier is considered to be.

The network of vendors in a supply chain often includes tiered suppliers (meaning a company does not receive materials directly from the supplier, but is involved in getting materials or parts from an upstream supplier to a downstream supplier). The more complex a product, the more significant the upstream supplier's roles are. From a supply chain manager's perspective, his suppliers are primarily responsible for managing their own supply chain but he should have some involvement.

Oftentimes, a manufacturing facility acts as a supplier to a downstream manufacturing facility. For example, a company could have their manufacturing plant in the U.S. and their assembly plant in Mexico. The U.S. plant would be considered an internal supplier, since it's part of the same company. The transportation of materials throughout the supply chain is often called logistics. This includes air, land, and sea shipping as well as customs processing to allow materials to cross borders. The supply chain does not end until the product reaches the consumer. For this reason, distribution centers, distributors, and wholesalers are all part of the supply chain. It is not rare for a supply chain to involve a dozen parties.

The relationship between a supplier and a manufacturing company is not as simple as a supply chain manager ordering parts and the supplier shipping them. There are continuous flows between the supplier and the customer. Figure X below shows these flows in chronological order from top to bottom. (Note that this figure is for an already established supplier and material.) In the case of a new supplier, a supplier audit (a verification that a supplier has the potential to meet the manufacturer's needs) should be conducted first to determine if the supplier is appropriate for the work.

In the case of new material, the customer must first supply the anticipated number of units required, along with all of the drawings and specifications, to the supplier to get a quotation of unit price and lead time. After the quotes are received and a supplier is chosen, a purchase order should be done for the setup costs and samples. Setup costs can be a few hundred to hundreds of thousands of dollars (mostly tooling costs). A supply chain manager should always present the setup costs along with the piece price quote when working with engineers (so manufacturing methods are not specified solely on unit cost). For example, making a simple part by thermoforming would cost about \$50 each, whereas making it by injection molding would cost \$5 each. However, injection molding requires a \$10,000 mold. If you only need 20 pieces annually, you are better off using thermoforming.

Depending on whether prototypes or the component have already been made or not, the samples ordered may be just to verify the ability of the supplier to make the parts, or to verify the design of the finished product. In other words, the supplier may fabricate a part correctly, but a manufacturer's engineering department may determine that the part needs to be redesigned. This would start the process over. Once samples have been approved, the flow of Figure X can be followed.

A manufacturing company has to furnish a forecast (usually annually) so the supplier can then go through his supply chain and make sure that all the materials needed (i.e. material, lubricant, machine capacity, labor resources) for the component the supplier provides will be available. A manufacturer then issues a purchase order, which serves as a commitment to purchase a defined number of units. A purchase order must have terms and conditions accompanying it to protect your company. Usually, a customer will not want to receive the entire forecast amount at once. Instead, a manufacturer could issue multiple purchase orders throughout the year, or do what is called a blanket purchase order for a large amount and then make releases against that purchase order for small amounts when they actually want it.

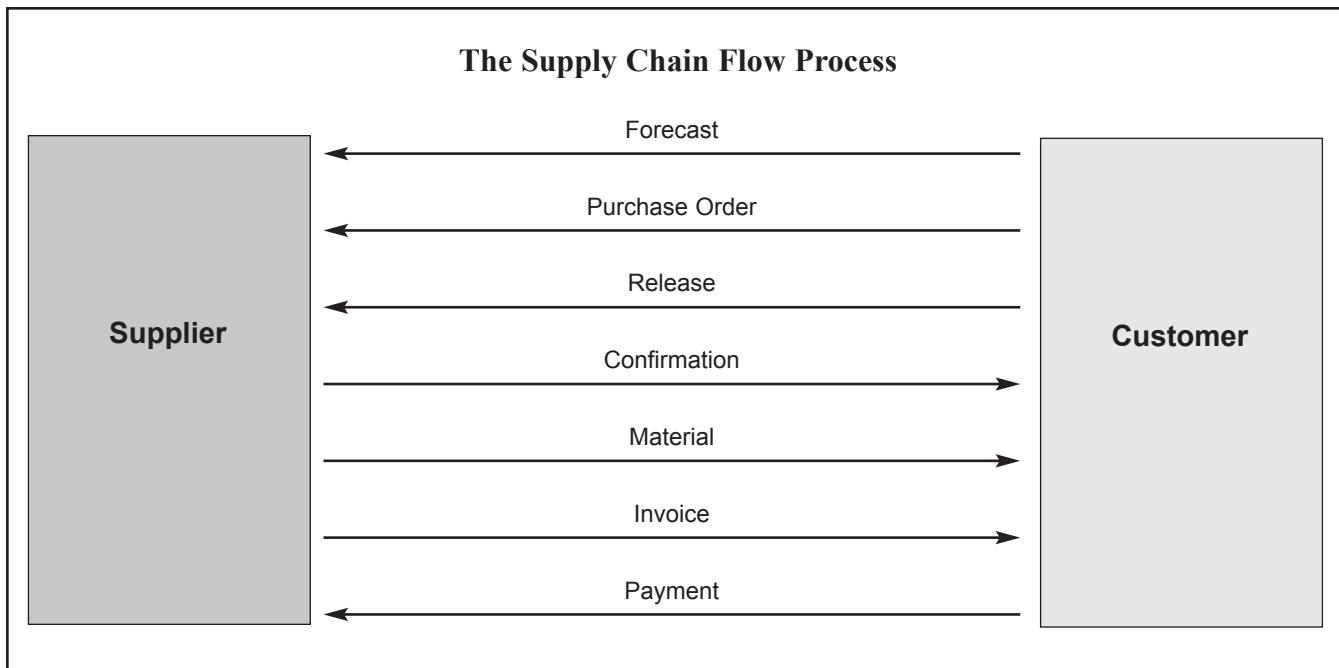
For example, a company uses 1,000 rods of aluminum in a year. They may lock into a price for the entire year (the price of aluminum changes daily), but not take delivery of all 1,000 rods at once. Instead, the supply chain manager would request economic order quantity (EOQ) releases. An EOQ is the optimal balance between taking delivery for the entire 1,000 rods at once and paying for material that will not be used for months, and paying transportation, inspection, and transaction costs for receiving frequent smaller shipments. The formula for EOQ is

$$\sqrt{\frac{2 \times \text{Demand} \times \text{Order Completion Cost}}{\text{Unit Carrying Cost}}}$$

where the Order Completion Cost is the total cost of placing the purchase order, paying for a setup at the vendor (if applicable), and paying the transportation and in-house handling to get the components to the production floor. The unit carrying cost is the cost of holding inventory (insurance, warehouse lease, shrinkage costs, security, cost of capital, etc.)

Customers can do releases to the supplier at specific time intervals or specific inventory intervals. With inventory intervals, when a customer gets to a certain number of rods left, they would issue a release for the next shipment of rods.

A supplier should send a confirmation to the customer acknowledging they have received the purchase order and agreed to the terms and conditions described therein. The supplier sends the material per the purchase order and then sends an invoice for the amount shipped. Once the goods have been accepted by the customer, a payment is sent to the supplier equal to the amount of the invoice.



OEM suppliers

There are basically three types of suppliers. In the first, or most conventional scenario, a company provides a design for what they want the supplier to furnish and the supplier makes it to the company's specifications. The second is the Original Equipment Manufacturer (OEM) supplier. In this case, the company does not specify the design for a custom product, but in fact buys a product that the supplier sells to many customers. These products are called off-the-shelf (a screw is an example of a component that is usually purchased as an off-the-shelf product rather than being custom designed).

Contract manufacturers

Contract manufacturers are the third type of suppliers, in which formal contracts between the supplier (the contract manufacturer) and your manufacturing company are relied upon. The contract manufacturer purchases or makes all of the components, assembles the product, tests it, and ships the finished product either directly to the customer or to a warehouse. Companies that want to get out of the manufacturing aspect of their products turn to contract manufacturers. The supply chain manager finds suitable contract manufacturers and manages the relationship after a contract has been signed. A company has to put a huge amount of trust into the contract manufacturer, since the customer does not have the same level of visibility or control over the manufacturing of the product as they do when they are making the product themselves. Contract manufacturing is an option in almost every industry from food processing to semiconductors.

Freight forwarders and transportation providers

Transportation providers and freight forwarders are also controlled by a supply chain management practitioner. Transportation providers pick up product from one location and deliver them to another. Obviously, it is very costly to pick up some cargo in Los Angeles and drive it all the way to New York for delivery. For this reason, these companies consolidate shipments from different places in a departing hub (whether it be a port, a warehouse, or an airport), send them to an arriving hub, and then deliver them to their final destination. It is quite common for a transportation provider to hand off a shipment to another company to carry out some or all of the transportation. This is called subcontracting or third party carriers. Specialty transportation providers also exist (i.e. for transporting explosive materials, refrigerated cargo, etc.). Some manufacturing companies have traffic, transportation, or logistics departments that take care of most of this work so a supply chain manager can concentrate on suppliers only.

Freight forwarders specialize in transportation across borders. They coordinate the paperwork, book the space with a transportation provider, and track the goods from pickup to delivery. Because of the complexity of customs requirements, tariff codes, and language barriers for different countries, it is better to have freight forwarders involved if a company is dealing with more than a few countries or commodities.

Job Responsibilities

Supply chain management occupations

Below are brief summaries of the duties for supply chain management occupations. Not every organization will have all of these positions and the duties of the positions will not be limited to those described here.

Buyer: Buyers do purchasing just like supply chain managers. The difference is that supply chain managers buy parts and materials for the company's products, whereas buyers purchase everything else. Some examples of items that buyers procure are desktop computers, office supplies, and hand tools.

Planner: A planner takes the forecast from marketing/sales and breaks that into a build schedule of what products should be built and when they should be built to meet inventory goals. Planners also work with supply chain managers to control inventory of parts and materials.

Purchasing Administrative Assistant: A purchasing administrative assistant takes care of the filing of paperwork for the purchasing department. S/he will also coordinate travel arrangements.

Logistics Manager: A logistics manager is responsible for the traffic of goods coming to and going from the factory. This encompasses air, land, and ocean traffic, both domestic and international.

Supply Chain Engineer: A supply chain engineer works on technical issues with the supplier. This involves working with suppliers to improve their quality, helping them to analyze failures, and developing new products.

Commodity Manager: A commodity manager is similar to a supply chain manager. Some companies separate the ownership of parts and materials for the supply chain managers by product line. For example, if a company makes binoculars, telescopes, cameras, and microscopes, and they have four supply chain managers, they might assign one supply chain manager for each product family. Another approach is to distribute the work by commodity. One supply chain manager would be responsible for the optics on all of the product families and one supply chain manager would be responsible for the plastic parts on all of the product families. When this is the case, the supply chain managers can be called commodity managers.

Receiving Inspector: A receiving inspector is responsible for checking the quality of the parts and materials that come from the vendor before they get moved to the production floor for consumption and before the supplier gets paid. There are statistics charts that define the number of samples from a shipment that need to be checked to meet the desired confidence level that the entire lot received is acceptable, so a receiving inspector does not check 100% of the incoming items.

Procurement Manager: A procurement manager is in charge of the buyers and supply chain managers. The procurement manager sets the goals for the department and provides a level of escalation when a supply chain manager is having trouble managing a supplier.

Receiving Coordinator: The receiving coordinator processes the parts and materials delivered. This includes doing a receiving transaction in ERP, moving the parts to their location, and making sure the paperwork the supplier sends matches what was received.

Receiving Supervisor: The receiving supervisor is responsible for the receiving department. Besides supervising receiving department workers, the receiving supervisor is in charge of creating and improving department processes.

Accounts Payable Coordinator: The accounts payable coordinator works in the accounting department and processes the invoices from the suppliers. After verifying the invoices match what was actually received, the accounts payable coordinator sends a payment to the supplier.

The MBA in Supply Chain Management

MBA graduates seeking opportunities in supply chain management usually pursue either a Project Manager or Director of Materials position. Both of these vocations require previous experience in supply chain management, so the likelihood of a new graduate landing one of these positions is low.

A Project Manager is responsible for large transitions related to supply chain management. One example of these transitions is a plant shutdown. A company may decide that it is more cost-effective to stop manufacturing their products themselves, and instead have a vendor do it for them. The management of a plant shutdown project requires cross-functional teamwork between accounting (working out the costs), engineering (helping the vendors get up and running), human resources (laying off the production workers), and manufacturing (managing the inventory to make a seamless transition). Another example of a transition is a large scale vendor change. A company may have a contract manufacturer in Mexico making its products. In an effort to reduce costs, the company may want to partner with a contract manufacturer in Vietnam instead. Making this transition can be even harder than a plant shutdown, because the existing supplier may become bitter and refuse to cooperate. Most often, these transitions are done without notifying the existing supplier until the new supplier is running at the required capacity.

A Director of Materials is responsible for the strategy of the purchasing group. He does not get involved in the details of the day-to-day operations of the supply chain management department, but will assume the reins when issues get out of control or need upper-management attention. A Director of Materials also sets the practices of his departments and approves large dollar item purchases. Similarly, the Director of Materials participates in vendor relationship management for the suppliers with whom the company spends the most money. In addition to providing strategic direction to the purchasing group, the Director of Materials spends significant time meeting with the other executives in the company, sharing expertise, championing causes, and staying abreast of issues facing the company. A Director of Materials also spends a lot of time networking with people outside of the company (i.e. industry experts, competitors, and prospective vendors).

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Phone: (408) 957-8500
Fax: (408) 957-6056
www.solelectron.com

Thermo Electron Corporation

81 Wyman Street
Waltham, MA 02454-9046
Phone: (781) 622-1000
Fax: (781) 622-1207
www.thermo.com

Toyota Motor Company

1, Toyota-cho
Toyota City, Aichi Prefecture 471-8571, Japan
Phone: +81-565-28-2121
Fax: +81-565-23-5800
www.toyota.co.jp (Worldwide)
www.toyota.com (North America)

United States Steel Corporation

600 Grant Street
Pittsburgh, PA 15219-2800
Phone: (412) 433-1121
Fax: (412) 433-5733
www.ussteel.com

United Technologies

One Financial Plaza
Hartford, CT 06103
Phone: (860) 728-7000
Fax: (860) 728-7979
www.utc.com

Weyerhaeuser Company

33663 Weyerhaeuser Way South
Federal Way, WA 98063-9777
Phone: (253) 924-2345
Fax: (253) 924-2685
www.weyerhaeuser.com

Media and Entertainment

Media and Entertainment MBAs

Not long ago, the creative types in media kept a wary eye on the suits or the bean counters, as the business side of media is known. For years, Wall Street paid little attention to the media biz, an industry it didn't take that seriously. Now, with the rise of the global conglomerates and the aftermath of dot-com meltdown, many media professionals, both on the creative and business sides, are finding it necessary to pursue an MBA.

A new order

"When we started, I had two courses and we had about 40 people in each. Today, in any given semester we have about 400 to 500 students taking one or more classes," says Al Lieberman, Executive Director of NYU Stern's Entertainment, Media and Technology Initiative. Started in 1996, Stern's EMT program awards a certificate to those students who complete at least nine credits in courses like Entertainment Finance and The Business of Sports Marketing. Over at Fordham Business School, Dr. Everette Dennis, Chair of the Communications and Media Management program has also seen an increased interest over the last couple of years, "We have a relatively small program, but we've had probably a 20 to 25 percent increase in applications." Fordham's program, believed to be one of the first in the country, began in the mid-1980s when Arthur Taylor, a former president of CBS, arrived as the business school's new dean and brought in William Small, another CBS executive, to head up the program.

So why are more and more media professionals interested in an MBA? Of course, many can argue that a wave of dot-com dropouts have decided to hide out in business school in the wake of the collapse of the dot-coms and the weak ad market. Lieberman argues that this is no trend. "It's a fundamental change because the competitive factors that are driving this are not going away. They are intensifying." He is talking about the breakup of the media landscape. Deregulation and mergers have given rise to media behemoths.

Technology, without a doubt, has wrought havoc in the industry, forcing firms to rethink their business strategies. That's one reason why Jason Oberlander, a first-year student at Columbia Business School, has found the business side of media so attractive. "The technology that comes out, it's coming out so quickly that it requires people who are able to adapt and think on their feet and are able to pursue new opportunities in order to be successful and compete effectively."

Consumers today have a rainbow of media products to choose from. Dennis says the media industry has become an important economic engine and Wall Street has taken notice. "All of the sudden this was an industry to be reckoned with." Lieberman points to a shift towards cooperation and the building of alliances as well, in an industry that has been notoriously competitive. The current negotiations between CNN and ABC News would have been unheard of just ten years ago. Not only has media seen enormous domestic growth, but abroad as well; says Lieberman, "For every dollar that is generated in the United States, 15 years ago the most they could look for was maybe 25 cents outside, as an export. Now it is dollar for dollar."

What does an MBA really offer?

"A few years ago, I would have said, 'An MBA that would be nice, but it really isn't necessary.' Now, I think an MBA, or at least some exposure to business practices, is probably essential," says Dennis. He cites a growing need for better understanding of market research, audiences, how to manage change and the cash position of a company. In the mid-80s, Lieberman started a marketing firm focused on entertainment and media. At the time, he couldn't find enough qualified candidates to keep pace with the growth of the firm. He ended up recruiting people right out of one of the courses he was teaching at NYU. "I taught this course that I created, called The Marketing of Entertainment Industries at the NYU School of Continuing Education. Out of the 40 or 45 adults that would come in from all kinds of industries to learn about this, I'd pick one or two that were the best and offer them jobs."

Oberland left Showtime as a Communications Manager in Sports and Event Programming, but felt an MBA was the only way to increase his chances for advancement. "I felt that doing the transition within the company would have been difficult. I certainly would have had to take a significant step down in title and in compensation." Dennis concurs that an MBA is increasingly becoming a requirement for management in media companies. "I think people on the creative side are not going to move into major management and executive roles unless they either get this kind of background and experience on their own in some way, or they go to a business school and get it where it is taught systematically."

Bridging the gap

"One of the biggest problems was the business people who stepped into this world of creativity, didn't understand the creative product, didn't understand how it made money, didn't understand how to apply the basic strategic thinking, therefore there was a huge disconnect," says Lieberman. It takes two to tango, and the creative side has also contributed to the disconnect. Fordham, recognizing the interest by some creative folks to bridge this gap, will be launching a new MS program soon, "It's really tailored to the people from the creative side who do need to know and understand more about business." Stern is also helping the business types better understand the creative process by encouraging Stern students to take courses in filmmaking at the Tisch School of the Arts. "They're not going to make films, but at least they understand the skills, so they don't come on a set and make complete idiots of themselves." At the end of the day, Oberland argues that you need the overall package to get ahead. "I think someone who balances the creative skills with business skills is the most suitable person to run a business from a general management standpoint."

Media Business Positions

Strategic planning

Strategic planning groups are small groups of about five to 40 professionals that serve as in-house consulting and investment banking arms. Not coincidentally, most employees are ex-consultants and bankers. Strategists are involved in valuation and negotiation decisions for acquisitions, business plans for new ventures, the expansion of the current business lines (and sometimes creating new ones), forward-looking financial plans to provide budgeting and overall prognosis for the health of all divisions of the company, and any other high-level issues that the company as a whole may be facing.

Because these projects affect the overall health of the company, meetings are often power sessions in the corporate dining room or top-floor board rooms with the company's senior executives, including the CEO, COO and CFO. While exposure to these individuals is one of the perks of this position, the jobs also tend to be incredibly challenging and taxing, as inordinate amounts of background data, research and information are synthesized and spun into a story prior to the presentation of findings. This group's job is all the more challenging, given that the recommendations that strategic planning groups deliver must necessarily be at odds with decisions that have already been made. Strategic planners, after all, are constantly trying to maximize the returns on the company's capital, which means analyzing and dismissing many current projects.

This function is also sometimes called corporate development, business development or in-house consulting. Because of the frequent exposure to high-level executives, the overall clout of the group and its impact in the major decisions of media conglomerates, these tend to be highly sought-after jobs, mostly filled by top-notch MBAs.

Corporate finance

Corporate finance is a sister group to strategic planning. Corporate financiers are the people who work in concert with investment bankers (or in lieu of them) to price deals, investigate options and plot the course of the company's growth through acquisitions of other companies.

Nearly all the major entertainment companies have grown through major acquisitions in the past two decades, increasing the importance of their corporate financiers. Corporate finance professionals investigate acquisition opportunities, gather competitive intelligence on other companies, determine synergies and negotiate deals. Likewise, they also divest businesses that may be undesirable in exchange for cash.

Most individuals in the corporate finance function are former investment bankers, accounting wizards and CFOs-to-be who bring their expertise in finance and public company performance to the entertainment industry.

Corporate marketing

Corporate marketing assesses consumer reaction to new projects, initiatives and endeavors. Often these groups are direct reports of business units (where each division has its own marketing group), but there are also many cases in which these groups are centralized under corporate and provide their services on an as-needed basis. The benefit of centralized marketing is that it enables the sharing of data across the company since the information is compiled by one group that can then spread the information. It also provides leverage with outside vendors (advertising agencies, media placement agencies, market research firms) when negotiating fees: the more money a company plans on spending with one deal, the better its negotiating position when choosing among competing agencies.

Corporate marketing encompasses many objectives:

- Market research and the execution of both quantitative and qualitative research
- The management of outside vendors who oversee new software, focus groups or large research studies
- Determining revenue projections for new products
- Soliciting consumer feedback on new and existing products
- Creating pricing models
- Estimating market penetration and rollout strategies
- Authoring marketing plans
- Supervising advertising and direct mail
- Overseeing overall brand equity and elements of brand differentiation like logo and identity
- Overseeing product-specific public relations efforts that drive coverage in the media

Corporate marketers often have an extensive background with advertising agencies or marketing consultancy firms.

Corporate public relations

For years, corporate PR was considered to be exclusively for damage control during events like the Exxon Valdez or the Tylenol cyanide scare. Whenever a CEO had problems with the press, the white knights of corporate PR came to the rescue to help avert a worse catastrophe. Corporate PR groups still perform this function. However, the work of corporate PR groups is much broader than just handling crisis management. Corporate PR groups now manage corporate spokespersons, serve as experts on media training and public appearances and coach CEOs as they prepare for media appearances and event marketing.

The corporate PR group is also known for initiating major press coverage in industry and business trade publications, as well as corporate-focused articles in general interest magazines like Time, Newsweek or Vanity Fair. PR professionals also develop relationships with government officials and lobbying groups that may have influence over legislation affecting the company's growth and development. Often, this group works with outside public relations agencies like Edelman Worldwide, Bozell or Hill & Knowlton.

Internet strategy

As content becomes increasingly commoditized due to the fact that so much on the Internet is free, there are challenges in protecting the hallowed material that entertainment companies create. While studios would love to use the Internet to hoard their content and prevent anyone else from distributing and profiting from it (sort of a preemptive strike against companies like Napster), the Internet is also an incredibly seductive resource for marketing, mainly because information can be communicated broadly and cheaply—much more inexpensively than TV commercials, billboards and bus shelters. The popularity of *The Blair Witch Project*, a surprise hit, was partially attributed to a very effective web site.

This tension (to promote our properties or protect them?) feeds the very complex and critical role that Internet strategy plays in the growth of media and entertainment companies. Because of the constantly evolving and still uncertain nature of the business, there are hundreds of individuals at nearly all major entertainment companies, tracking evolving technologies, coding pages, maintaining fresh web site content and otherwise marketing via the Web. Media companies with Internet strategy groups include Walt Disney/ABC and AOL Time Warner.

Real estate development

Real estate development within an entertainment company involves not only theme parks, but also extensions of an entertainment empire's brands, including themed restaurants (Hard Rock Café), sports stadiums, entertainment complexes (Sony Metreon) and other destinations that involve large tracts of land that can both provide steady revenue streams and impress an entertainment-seeking audience. The major entertainment companies often have proprietary lots of their own land that were either part of the company's origin (as Disney does with its land in Florida and Southern California, now managed under the aegis of the Disney Development Corporation), were results of acquisitions or were acquired over time.

As real estate development is its own unique business with special financing rules and its own intrinsic rewards, the field generally attracts individuals from outside the entertainment industry. The most successful individuals in these divisions are those with substantial experience managing vendors, contractors and landscape architects, working with community development offices, leveraging tax benefits and executing visionary blueprints. Real estate development is a particularly exciting division for individuals wishing to combine interests in the hospitality industry, finance and real estate.

Our Survey Says: Lifestyle and Pay

Hours

Like so many industries, there is a work-life tradeoff that comes in the entertainment industry. "There are tons of tradeoffs," says one longtime employee in the strategic planning group of a studio. "The entertainment industry definitely doesn't come to mind when I think about a balanced lifestyle. It's a rare day I don't put in 12 hours."

But that's not always the case. There are many individuals that report (mostly outside of strategic planning and other corporate groups) consistently being home by 6. While the career trajectory is slower and the compensation is lower in the "business units" (versus the "corporate side"), the hours and the requirements are less demanding. There are always exceptions. Says one theme park executive: "Hours are usually 9 to 6, but every year for a few weeks in the spring during our five-year planning process, it's not uncommon for us to put in 12 hours a day, seven days a week."

One rule of thumb: Corporate jobs that report to the CEO typically face "fire drills" (i.e. urgent deadlines imposed at the last minute) on a regular basis. Jobs that are more predictable (i.e., positions with business units rather than corporate-level positions) generally have more predictable hours.

Pay

“The pay in corporate jobs is usually up there with investment banking and management consulting,” reports one former consultant-turned-analyst at a publishing house. The business units, however, are typically known for paying less, both because they are responsible for profit and loss (high salaries come straight out of the topline) and because of the less grueling hours. (For the difference between corporate and business units, see *Organizational Chart of Media Companies*.)

At the corporate level, beginning-level analysts out of college typically start at around \$40,000, with several thousand dollars in bonus and a 15 percent raise after a year. Managers make at least \$80,000 and directors usually crack six figures. VPs earn in the low \$100k range.

In business units, the pay can be anywhere from 10 to 30 percent lower.

Other perks

Entertainment is attractive partly because of its perks. “Let’s face it, I got into the industry hoping to hang out with rock stars,” confesses one record industry insider. Employees get discounts on products, invitations to advance screenings of movies and tickets to movie premieres and gala parties. That said, the perks are not nearly as lavish as the expense accounts and freebies that come on the creative side of the business. There are the stories of the business folks who occasionally get free lunches, tickets to movie premieres and celebrity wedding invitations, but these are mostly the result of a person’s personal connections.

Another practice, widely considered a perk, is that many within the industry itemize taxes and deduct all their entertainment expenses in the name of the job. “I itemized everything from my stereo to my movie tickets,” boasts one corporate finance manager.

Promotions and competition

There is indeed jockeying for certain roles and positions, as there is in any industry, but the business side is not as ugly as the creative side when it comes to competition. Promotion decisions are not based on whether people like you, or on how your last film did, but rather on the body of your professional work. Even though there is an oversupply of people vying for the available jobs, it is a largely meritocratic industry.

A Day in the Life: Strat Planning Executive

While there's no "typical" day in strat planning at a media company, below are some of the most common day-to-day tasks:

- Interfacing with other business units, domestically and abroad, either in calls or in meetings (25%)
- Presentations to the senior executive team on key decisions (25%)
- Presentations from the business units on growth initiatives within other groups (10%)
- Responding to requests from senior management (25%)
- Managing junior team members (15%)

If this sounds murky or unclear, read on for an illustration of the specifics. Overall, the hours are long. There are often stories of many executives who do not have families or children, or often forsake them for their careers.

7:00 a.m.: Arrive at work, make conference calls to Europe to discuss progress on a major new initiative to expand in Europe.

8:00 a.m.: Breakfast meeting with a manager in another business unit, to update one another on work and "keep both ears close to the ground."

9:00 a.m.: Review a subordinate's presentation, assigned last night. The presentation is due early tomorrow for the CEO—revisions must be made with haste.

10:00 a.m.: Return some morning phone calls. Glance at e-mail for anything urgent.

10:30 a.m.: Leave for an off-site meeting to discuss what to do with a waning division in which the top chief just left.

10:45 a.m.: Call my assistant. Have her type up e-mail responses to some new e-mails and send them off on my behalf.

10:55 a.m.: Arrive at off-site meeting. Listen to presentations from key leaders on what to do next.

12:00 p.m.: Depart for lunch meeting with a senior VP at another small entertainment company to propose an acquisition.

1:30 p.m.: Return to office to debrief with CFO on the numbers needed for a 5-year plan.

3:00 p.m.: Answer e-mails, review daily trade publications, The Hollywood Reporter and Daily Variety.

3:45 p.m.: For fun and to build team morale, respond to office pool on what the weekend's box office will be.

3:47 p.m.: Spontaneous meeting with CEO in the hallway—turns out the presentation originally due tomorrow is not that urgent.

4:00 p.m.: Tell junior manager to call off work and go home since she's been pulling all-nighters for a couple of days.

4:10 p.m.: Start reviewing budget requests and expense reports of department employees.

5:00 p.m.: Peruse the proposals from three top management consulting firms, all vying for a piece of a major project.

6:30 p.m.: Make a conference call to Asia executives to discuss progress on their latest initiative.

7:30 p.m.: Answer all outstanding e-mails.

8:30 p.m.: Leave the office.

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ABC, Inc.

77 W. 66th Street
New York, NY 10023-6298
Phone: (212) 456-7777
Fax: (212) 456-1424
www.abc.go.com

Bertelsmann AG

Carl-Bertelsmann-Strasse 270
D-33311 Gütersloh, Germany
Phone: +49-5241-80-0
Fax: +49-5241-80-9662
www.bertelsmann.com

Black Entertainment Television

One BET Plaza
1235 W. Street, NE
Washington, DC 20018
Phone: (202) 608-2000
Fax: (202) 608-2589
www.bet.com

Bloomberg L.P.

499 Park Avenue
New York, NY 10022
Phone: (212) 318-2000
Fax: (917) 369-5000
www.bloomberg.com

Creative Artists Agency

9830 Wilshire Blvd.
Beverly Hills, CA 90212-1825
Phone: (310) 288-4545
Fax: (310) 288-4800
www.caa.com

CBS, Inc.

51 W. 52nd Street
New York, NY 10019
Phone: (212) 975-4321
Fax: (212) 975-4516
www.cbs.com

Clear Channel Communications

200 E. Basse Road
San Antonio, TX 78209
Phone: (210) 822-2828
Fax: (210) 822-2299
www.clearchannel.com

CNN News Group

1 CNN Center
Atlanta, GA 30303
Phone: (404) 827-1500
Fax: (404) 827-2437
www.cnn.com

Comcast Corporation

1500 Market Street
Philadelphia, PA 19102-2148
Phone: (215) 665-1700
Fax: (215) 981-7790
www.comcast.com

Cox Communications, Inc.

1400 Lake Hearn Drive
Atlanta, GA 30319
Phone: (404) 843-5000
Fax: (404) 843-5975
www.cox.com

Discovery Communications, Inc.

1 Discovery Place
Silver Spring, MD 20910
Phone: (240) 662-2000
Fax: (240) 662-1868
www.discovery.com

Dow Jones & Company, Inc.

1 World Financial Center
200 Liberty Street
New York, NY 10281
Phone: (212) 416-2000
Fax: (212) 416-4348
www.dj.com

DreamWorks SKG L.L.C.

1000 Flower Street
Glendale, CA 91201
Phone: (818) 733-7000
Fax: (818) 695-7574
www.dreamworks.com

Fox Entertainment Group

1211 Avenue of the Americas
New York, NY 10036
Phone: (212) 852-7111
Fax: (212) 852-7145
www.fox.com

Gannett Company, Inc.

7950 Jones Branch Drive
McLean, VA 22107-0910
Phone: (703) 854-6000
Fax: (703) 854-2046
www.gannett.com

HarperCollins Publishers, Inc.

10 E. 53rd Street
New York, NY 10022
Phone: (212) 207-7000
Fax: (212) 207-7145
www.harpercollins.com

Home Box Office (HBO)

1100 Avenue of the Americas
New York, NY 10036
Phone: (212) 512-1000
Fax: (212) 512-1182
www.hbo.com

Houghton Mifflin Company

222 Berkeley St.
Boston, MA 02116-3764
Phone: (617) 351-5000
Fax: (617) 351-1105
www.hmco.com

International Data Group

1 Exeter Plaza, 15th Floor
Boston, MA 02116-2851
Phone: (617) 534-1200
Fax: (617) 423-0240
www.idg.com

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John Wiley & Sons, Inc.

111 River St.
Hoboken, NJ 07030
Phone: (201) 748-6000
Fax: (201) 748-6008
www.wiley.com

Paramount Pictures

5555 Melrose Avenue
Hollywood, CA 90038
Phone: (323) 956-5000
Fax: (323) 862-1204
www.paramount.com

Reed Elsevier NV

Raderweg 29
1043 NX Amsterdam
The Netherlands
Phone: +31 20 485 2222
Fax: +31 20 618 0325

Liberty Media

12300 Liberty Blvd.
Englewood, CO 80112
Phone: (720) 875-5400
Fax: (720) 875-7469
www.libertymedia.com

Pearson PLC

80 Strand
London
WC2R ORL
United Kingdom
Phone: +44-20-7010-2000
Fax: +44-20-7010-6060
www.pearson.com

Reuters Group PLC

85 Fleet Street
London
EC4P 4AJ, United Kingdom
Phone: +44-20-7250-1122
Fax: +44-20-7542-4064
www.reuters.com

Martha Stewart Living Omnimedia, Inc.

11 W. 42nd Street
New York, NY 10036
Phone: (212) 827-8000
Fax: (212) 827-8204
www.marthastewart.com

Penguin Group

80 Strand
London
WC2R ORL
United Kingdom
Phone: +44-2070103396
Fax: +44-2070106642
www.penguin.com

Scholastic Corporation

557 Broadway
New York, NY 10012
Phone: (212) 343-6100
Fax: (212) 343-6934
www.scholasticinc.com

The McGraw-Hill Companies, Inc.

1221 Avenue of the Americas
New York, NY 10020
Phone: (212) 512-2000
Fax: (212) 512-3840
www.mcgraw-hill.com

Pixar Animation Studios

1200 Park Avenue
Emeryville, CA 94608
Phone: (510) 752-3000
Fax: (510) 752-3151
www.pixar.com

Simon & Schuster, Inc.

1230 Avenue of the Americas
New York, NY 10020
Phone: (212) 698-7000
Fax: (212) 698-7099
www.simonsays.com

Metro-Goldwyn-Mayer Inc.

10250 Constellation Blvd.
Los Angeles, CA 90067
Phone: (310) 449-3000
Fax: (310) 449-8857
www.mgm.com

Primedia

745 Fifth Avenue
New York, NY 10151
Phone: (212) 745-0100
Fax: (212) 745-0121
www.primedia.com

SourceMedia

One State Street Plaza
27th Floor
New York, NY 10004
Phone: (212) 803.8200
www.sourcemedia.com

National Public Radio, Inc.

635 Massachusetts Avenue NW
Washington, DC 20001-3753
Phone: (202) 513-2000
Fax: (202) 513-3329
www.npr.org

Reed Elsevier PLC

1-3 Strand
London
WC2N 5JR, United Kingdom
Phone: +44-20-7930-7077
Fax: +44-20-7166 5799
www.reedelsevier.com

Time Warner

1 Time Warner Center
New York, NY 10019
Phone: (212) 484-8000
Fax: (212) 489-6183
www.timewarner.com

News Corporation

1211 Avenue of the Americas
8th Floor
New York, NY 10036
Phone: (212) 852-7017
Fax: (212) 852-7145
www.newscorp.com

USA Network, Inc.

152 West 57th Street
New York, New York 10019
Phone: (212) 314-7300
Fax: (212) 314-7309
www.usanetwork.com

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Viacom Inc.
1515 Broadway
New York, NY 10036
Phone: (212) 258-6000
Fax: (212) 258-6464
www.viacom.com

Vivendi Universal
42 avenue de Friedland
75380 Paris Cedex 08
France
Phone: +33-1-71-71-10-00
Fax: +33-1-71-71-10-01
www.vivendiuniversal.com

W.W. Norton & Company
500 5th Avenue
New York, NY 10110
Phone: (212) 354-5500
Fax: (212) 869-0856
www.wwnorton.com

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Pharmaceuticals and Biotech

What's in a Name: Big Pharma, Big Biotech and Biopharma?

Strictly speaking, the term “pharmaceuticals” refers to medicines composed of small, synthetically produced molecules, which are sold by large, fully integrated drug manufacturers. The largest of these players - companies like Pfizer, GlaxoSmithKline and Merck - as well as a handful of others are referred to as “Big Pharma” because they are huge research, development, and manufacturing concerns with subsidiaries all over the globe. Indeed, Big Pharma is where over 50% of the industry’s sales are generated. Big Pharma is responsible for all those television commercials urging us to contact our doctors if we suspect we suffer from everything ranging from acid reflux disease to social anxiety disorder. Yet despite life-saving, cancer-fighting drugs and significant corporate philanthropy, Big Pharma’s recent product recalls and safety testing troubles (Vioxx and Celebrex) have made it the industry we’ve come to love to hate.

Most biotechs are small, research-oriented companies dedicated to applying genetics to curing a multitude of heartbreaking diseases, ranging from Alzheimer’s to multiple sclerosis. A handful of companies - such as Amgen, Genentech and Chiron - have broken through the rest of the pack to become “fully integrated” like their Big Pharma cousins. The term “fully integrated” means that they manufacture as well as sell their own products. These “products” are proteins, which need to be injected since they are very large molecules compared to the synthetic molecules Big Pharma sells. The largest biotechs are actually mid-size pharmaceutical companies in the way they function and are sometimes called “Big Biotech.”

As for the largest Big Pharma players, most are either gobbling up small biotechs through outright acquisitions or, alternatively, are entering licensing agreements. This has been happening over the last decade, and is likely to continue throughout the rest of this decade, since it is increasingly difficult to find innovative new drugs through traditional science. In fact, innovation is the industry’s biggest current challenge. Companies are using acquisitions and alliances to round out their product pipelines and meet investor expectations. Big drug manufacturers can now claim to research, manufacture and sell both synthetics and biologics. What this means to you is that you should include the largest biotechs as well as the largest traditional pharmaceuticals when planning a marketing career. That’s good news since it increases the number of players and potential employers.

What you should keep in mind, however, is that the marketing models around which traditional pharmaceuticals and biotechs are developed are complementary. Pharmaceutical companies are generally organized around the “blockbuster” model, i.e., they derive most of their sales and profits from a handful of broadly acting drugs, which are mass-marketed to a broad patient population by a network of sales representatives, or “detail” people. This is the same model that brought Vioxx to the market and it is increasingly under attack. By industry consensus, a “blockbuster” is a drug whose annual revenues reach or exceed \$1 billion. The biotech firms, on the other hand, tend to be organized around smaller franchises, i.e., their products are targeted to small patient populations with rare genetic diseases. Their biologics are sold by specialty sales representatives, who often have a relatively high degree of scientific knowledge. Because of this focus, biotech products are often referred to as specialty pharmaceuticals. To complicate matters, some biologics reach blockbuster status with respect to their revenues, since they are usually much more expensive than therapeutics. Considering that some biologics cost \$10,000 per patient per year, you would need a mere 100,000 patients to reach \$1 billion in revenues. Compare this to the millions of patients who ingest small molecule drugs like Prozac or Viagra.

Because this transition is ongoing, the dividing line between the two industries will continue to blur. That leaves us with the problem of how to refer to the emerging industry. Some people use the term “Biopharma” to include both types of products.

The Global Biopharmaceutical Industry

The global industry is dominated by three major market segments: North America is the largest and comprises 49% of the total market, Europe is second with some 28%, and Japan third at 11% in 2003 sales. Although these combined markets

account for 78% of global sales, the remaining emerging market segments - Other Asian, Africa, and Australia and Latin America - are growing rapidly.

Although the industry is dominated by a handful of super-large companies, the global industry is actually highly fragmented. Over 2,000 pharmaceutical and biotech companies exist worldwide. In the top tier are the large, multinational companies that dominate the market or Big Pharma. In the middle tier are the specialty companies. Many large companies have tended to absorb second-tier companies before they can grow enough to pose a competitive threat. That trend has a contracting effect on the number of firms. The opposite happens on the third and lowest tier, which is composed of an ever increasing group of start-ups mostly focused on discovery research.

According to IMS Health, Inc., a healthcare research and information company, as recently as 1998, the global pharmaceutical market was valued at \$280 billion. By 2003, total global sales had grown 9% over 2002 levels to \$492 billion or nearly half a trillion dollars! This figure was derived retail sales in major global markets. This astonishing growth over five-year period reflects the increasing role pharmaceuticals is taking as a first-line treatment option in many disease conditions in the developed world.

Economic activity is concentrated in both products and therapeutic areas. As we noted, most of the industry's revenues are based on mega-sales of blockbuster products, i.e., those that generate at least \$1 billion in sales. In 2000, the highest selling 20 drugs generated sales revenues of \$100 billion or roughly 50% of total sales of the top 500 drugs. In 2002, 58 products each generated sales over \$1 billion. Reflecting the stress-ridden, developed world's disease vulnerabilities, the most profitable products treated heart disease, gastric distress, mood and mental disorders, and inflammatory conditions.

The U.S. pharmaceutical industry

The U.S. pharmaceutical industry is comprised of approximately 100 companies, according to the Pharmaceutical Research and Manufacturers of America (PhRMA), a leading industry trade and lobbying organization. This does not include biotech companies, which number approximately 325 publicly traded companies, with hundreds more private, discovery research oriented firms. The U.S. drug market is concentrated - the top ten largest companies accounted for 60% of total retail sales in 2003, according to IMS Health, Inc.

The U.S. has not only the largest pharmaceutical market in the world but also the only one without government controls. That characteristic has major consequences on drug pricing, innovation, and R&D investment. Standard & Poor's expects the U.S. to continue to be the largest of the top 10 pharmaceutical markets for the foreseeable future as well as the fastest growing.

Although pharmaceutical companies are scattered throughout the continental United States, the industry is geographically concentrated in the Mid-Atlantic States (New York, New Jersey, and Pennsylvania) and on the West Coast in California. A handful of companies can also be found in Massachusetts, Illinois, and North Carolina. New Jersey is the heart of the industry and has by far the largest number of companies within a single state. (Note the geographic distribution of the biotech industry in the Guide to Biotech.)

MBA Level Sales and Marketing Jobs

Most companies consider sales and marketing to be one function, but with two basic areas of activity. Within the Sales function, you can typically find three career tracks: Field Sales, Sales Management, and Managed Markets. A fourth track, Sales Training is closely associated with Sales and is distinct from the broader Training and Development function, which is usually associated with Human Resource Departments. Sales Training groups bridge the sales and marketing function: in some companies, they are considered part of marketing support, and hence part of the marketing function. The main point, however, is that all companies that have Field sales forces have rigorous sales training departments.

Within the marketing function are two main areas of activity: marketing management and marketing support. The latter is actually composed of several distinct groups, some of which are quite large, but all of which serve essentially the same purpose: to provide support services for marketing managers. Depending on the size of the company, the distinction between the two areas may be either blurred or non-existent. Typical groups include training and development, advertising and promotion, market analysis, customer call center, e-business, and commercialization and strategic planning.

Fully integrated Big Biotech companies have their own sales and marketing infrastructure and essentially the same job classifications. The main difference from their Big Pharma cousins is that biotech sales reps are specialty reps, who market products to specific and highly defined patient groups. On an experiential level, the big difference is that that very focus prevents the overreaching to the mass market that is now plaguing the marketers of broadly acting agents.

The good thing about the sales and marketing function in the biopharmaceutical industry is that, once you get hired in a particular work area, it is possible, and even encouraged, to gain experience in other areas.

Sales management

Managing a sales force can be one of the most lucrative tracks in the pharmaceutical industry. District sales manager is the first rung on the management ladder, followed by regional sales manager, area sales director, and vice president of sales. Each level has increasing responsibility for the sales of a broader geographic area. This is not an entry-level job and usually requires several years of direct sales experience plus evidence of leadership potential. In particular, the first level, district sales manager, is a position people from several areas of activity can move in and out of to get perspective on sales activity.

Like field reps, the responsibilities of a sales manager fall into three distinct categories. Management responsibilities require a sales manager to lead assigned sales district in meeting upper management goals; recruit, hire and train sales reps; ensure efficient coverage of their assigned geographic area; plan and lead meetings to review sales achievements; and manage Reps' activities when coordinating educational events (e.g., symposia, speakers bureaus, seminars, etc.). Administrative responsibilities require sales managers to develop business plans and plans of action (POA's), implement market strategies, monitor progress of ongoing sales activity, stay current on industry and company issues that impact the sales force, ensure optimal distribution and consistent stocking of product samples, monitor the district's budget, and control its expenses. Professional Development responsibilities require the sales manager to maintain a work environment that maximizes motivation, act as a coach and mentor to the sales reps, and create individualized development plans for each direct report.

Marketing management

Marketing management is the core work of the marketing function and is where strategy is formulated and implemented. Many companies organize marketing management according to therapeutic areas (i.e., oncology drugs, cardiovascular drugs, anti-hypertensives, etc.). Until recent years, marketing had a single upward path to senior positions. With large companies merging into mega-companies (e.g., Pfizer acquired both Warner-Lambert and Pharmacia to become the largest company in the industry), some companies have opted to organize therapeutic areas and their associated products into separate business units, so that marketing management decisions get made with fewer layers of oversight and with closer contact with customer physicians and targeted patient groups.

The main job title in marketing management is product manager and is consistent throughout the industry. From there, titles like product director, group product manager, and vice president of marketing represent higher level marketing management jobs. None of these are entry-level positions at the BS level, although MBAs with previous marketing experience can work in product management groups, as assistant or associate product managers.

A product manager's responsibilities fall into two main categories. Product management responsibilities require the product manager to develop and manage the short term product strategy and marketing plans for assigned products, oversee development of business plans, specify the positioning of a product among its competitors, monitor those competitor products, acquire both a quantitative and intuitive feel for customer needs, and act as an in-house champion for a product or brand. From an administrative perspective, a product manager must develop budgets, maintain records of expenses, and manage and develop entry-level support staff.

In companies organized as business units, product managers effectively become mini-CEOs and are involved in virtually every aspect of getting a product to market. Most product managers also have substantial communication and negotiation skills, as they are required to interact with professionals from every part of the organization.

Marketing support: Market analysis

Market analysis groups are responsible for gathering and analyzing business information in specific geographic areas to understand the economic profile of specific disease conditions in which the company specializes, the associated targeted patient populations - including demographic trends and shifts and progression of disease conditions - and the competitive landscape for the products under development. Jobs have titles like market analyst or regional analyst. Although these jobs are usually not entry-level with only a Bachelor's degree, many MBAs target market analyst jobs after graduation and can land them if they have basic science education and can demonstrate evidence of some understanding of the industry's marketing issues.

A market analyst has primarily analytical responsibilities, which are consistent throughout the industry. Typical tasks are to perform local healthcare marketplace assessments, provide analysis and consulting support to sales and marketing management, develop and implement tools and processes for standard sales performance measurement, identify opportunities and assess threats for the company's products, measure financial ratios (e.g., return on investment or ROI, market share, etc.), and analyze tactical plans based on historic performance.

Business Development in Biotech

Business development

On the business development side, research analysts provide the extensive research and analysis needed to determine how and with whom a biotech company should partner with. Analysts generate the assessments that help business development management determine how to meet its goals. Analysts answer such questions as, "Should we expand organically or acquire other companies to grow?" and "Who should we partner with to become more competitive?" Research analysts work with attorneys to assess intellectual property and licensing issues, help develop and enforce agreements, and secure licenses for ongoing operations. Many companies have senior analyst positions with the same responsibilities, but operating more autonomously. Analysts can bring home salaries ranging from \$90,000 to \$110,000.

It's a significant step up to manager of corporate planning, a job that generally appears at the larger companies. They prepare long-range and strategic plans (usually several years out) and short-range/tactical plans (up to a year out). Other activities include designing and executing financial planning processes, setting targets, and planning guidelines. The manager of corporate planning works closely with the CFO to develop the company's financial plans for senior management, industry analysts, and investors. They complete competitive analysis and continually assess the prospects for the company. This senior position usually has salaries ranging from \$110,000 to \$120,000.

At the head of the group is the vice president of business development, a very important position in most biotech companies. The VP of biz dev oversees all efforts to identify, evaluate, and pursue potential strategic partners, joint ventures, and

alliances. This person also directs the assessment of the licensing potential of targets, leads and drug candidates as well as the managing of all collaborations. They maintain partnership agreements and address the inevitable issues that arise in any relationship. Most companies ask for impressive credentials to reach this level: an MBA, a science degree and nearly a decade of experience that includes knowledge of due diligence, asset valuation, alliance integration, and portfolio management. As an executive, the VP can expect to earn a salary ranging from \$160,000 to \$190,000 and also receive additional incentive compensation.

A Day in the Life: Business Development Manager

A business development manager at a mid-sized company (about 300 employees) gives Vault the inside scoop on job responsibilities as a biotech MBA. He holds a BS in Microbiology and an MBA.

There is no routine to my days. My days are divided between proactive and reactive work. Although you have much more control on the proactive side, I'm often on the reactive side of things. This makes my days much less predictable. You have to be able to plan both sides to be productive.

Proactive work: My typical proactive tasks include:

- Getting back to any potential customers
- Scheduling meetings with prospects
- Sending draft proposals to potential clients to go through the details in preparation for negotiating contract terms
- Conducting project review board meetings to screen potential projects at a high level (e.g., senior executives, subject matter experts or SMEs) to make a go/no go decision. This involves collecting information, drafting, or editing proposals
- Conducting commercial review meetings with existing clients to review current projects and determine whether we are meeting our agreed-upon terms (usually either monthly or biweekly meetings)
- Coordinating and scheduling conferences and trade shows
- Regularly and routinely contacting key industry players who we may not have business with (i.e., maintaining relationships)

Reactive Work: My reactive work typically involves:

- Responding to potential client inquiries (phone, e-mail, referral) to set up meetings, collect information, draft proposals, review them with clients, respond to their questions, and set up the terms of the contract
- Setting up negotiations with internal clients (e.g., senior executives) as well as external clients

It's important to react in a structured way, but the points of reaction are not that predictable. The challenge is always scheduling, since multiple people with multiple schedules can make coordination unpredictable.

Business Development Manager Upers and Downers

Upers

- Travel can be either a pro or a con, depending on whether you are single or have a family.
- I am often in conversations with leading researchers, who are on the cutting-edge of science, discussing how products are going to be commercialized—that's exciting.
- Bringing products to market that are helping to save people's lives is also very satisfying.
- I like having the flexibility and freedom that comes from having a job with limited structure and a measure of unpredictability.

Downers

- I am quite often the giver of bad news and the receiver of client reactions to that news. For example, when their schedule changes, and they don't make promised deliveries, that impacts everything we do, and often delays our ability to manufacture the product.
- You also have to have a thick enough skin to not react to their disappointment and anger.

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United Kingdom
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Fax: +44-20-7304-5183

AstraZeneca U.S. headquarters:

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Wilmington, DE 19850-5438
Phone: (302) 886-3000
Fax: (302) 886-2972
www.astrazeneca.com

Aventis (Sanofi-Aventis Group)

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Real Estate

History of the Real Estate Industry in the United States

Real estate is tangible. It's a piece of land and any building or structures on it, as well as the air above and the ground below. Everyone comes into direct contact with real estate. The places we live, work, go to school, vacation, shop and exercise, are all assets to be bought, sold and rented. And it's always been an important element of the economy. .

Real estate has always been big business in the United States. Shortly after the signing of the Constitution, the federal government began transferring one billion acres of land to private owners through land sales and land grants. In the 1830s, for example, the government sold 20 million acres at roughly \$1.25 per acre. This sounds like a bargain to us today, but at the time the vast majority of citizens couldn't afford that price. Consequently, a grassroots group called the Free Soil Movement formed and lobbied the government for an alternate method of distributing land.

The Homestead Act of 1862 was Congress' answer to the appeal. Settlers who did not already own what was considered a "judicious" amount of land were given title to 160 acres for each adult in the family. There was no cash exchange. Instead, the understanding was that the settlers would live on and improve the land for a period of at least five years. This program was very successful and similar federal land distribution programs followed until the later part of the nineteenth century. In total, the U.S. government distributed more than 300 million acres of public property to private landowners through the Homestead Act, creating the basis for the real estate market.

For the first time in the history of the young country, there was a system in place by which one landowner could transfer property rights to another through sale, lease or trade. This led to a tremendous amount of speculation. Some investors accumulated a tremendous amount of wealth, while others lost everything.

At the end of the 19th century, America was transitioning from an agricultural society to a manufacturing economy. Citizens flocked to urban areas to work at the burgeoning factories. For example, as the Midwest's industrial center, Chicago reached a population of one million people more rapidly than any other city in history. Settled in the 1830s, the city grew from less than 1,000 inhabitants to become the fifth largest city in the world by 1900.

The values of urban properties skyrocketed. By 1920, 50 percent of America's population lived in cities. This urban density created opportunities for real estate development as housing, office buildings, industrial facilities, hotels and retail centers were constructed to meet the demands of city dwellers.

Skyrocketing property values and associated costs began pushing people and businesses outside the city, just as advances in transportation made living outside the city easier. Suburbs, communities just outside urban centers, began to spread. Developers made these planned communities attractive by building along the transportation routes so people could easily commute to their jobs in the cities.

Technological advances influenced the building boom of the 1920s. Communities were wired for electricity, new machines such as elevators helped meet additional demand for space and allowed the construction of ever-taller buildings. Planned communities began taking shape in the suburbs, while skyscrapers changed the way the cities looked. One hundred buildings higher than 25 stories were constructed in this decade, most of them in New York City, with Chicago a distant second.

The Great Depression crippled most industries—including real estate. Values dipped below debt levels, causing a collapse. The federal government put the domestic financial markets through a major overhaul and was shrewd enough to include real estate financing as part of the New Deal programs. The Federal Housing Administration (FHA) was created in 1930 to provide mortgage insurance, lowering the risk on real estate loans and making lending more palatable for savings and loans and banks. The government also created the Federal Home Loan Bank System (FHLB) to supervise and regulate local banks. In 1938, the Federal National Mortgage Association (FNMA or Fannie Mae) was created to provide a secondary mortgage market as well as to lure investment capital in the mortgage market, and continues to play a very important role in supplying

capital to the mortgage market today. These New Deal programs ultimately made the real estate finance market more sophisticated and secure.

America and the real estate industry slowly climbed out of the Depression only to fall headlong into the Second World War. Development was put on hold during the war, but once the GIs returned from overseas, another era of prosperity began. A tremendous amount of demand for housing emerged virtually overnight. By 1946, new housing construction quadrupled to over 500,000 homes. In the postwar period, a white picket fence and peaceful green lawn proved very appealing. Two-thirds of the 15 million homes built in the 1950s were in the suburbs.

The decade was also a period of expansion for the highways, which provided access to more areas by car and truck. This enabled all types of real estate (e.g., hotels, industrial and retail centers) to be located further outside the city. Hotel chains like Holiday Inn started popping up along roadways across the country. The suburban shopping mall also became popular in this era.

As the suburbs grew, the cities slumped. By 1960, many urban centers hadn't seen new office building development in 30 years. The decay of America's urban areas didn't go unnoticed. Community activism and political pressure led to the creation of a cabinet position in 1965 focused on improving urban housing—what today is known as the Department of Housing and Urban Development (HUD). The central business districts of America's urban centers saw a number of new buildings (both commercial and retail) constructed during the last three decades of the twentieth century, spurred by growth in the service industry, increased access to financing and municipal incentives.

Today, the real estate industry is considered one of the most dynamic and healthy sectors in the American economy—people may divest their stocks, but they always need a place to live, work and shop. (To read more about the history of real estate, read *Real Estate Development* by Miles, Berns and Weiss.)

Industry Trends

As of 2006, the real estate business employed over nine million people, and opportunities abound for candidates to earn staggering income levels. Those who work in this sector often enjoy greater flexibility in job responsibilities than in other industries, though there can be drawbacks, in the form of low paying entry-level positions, competitive co-workers and long hours when starting out. Furthermore, once you're established, relocation can be detrimental to your career, as this industry is often geography-specific.

The real estate sector is largely dependent on the economy; small shifts can impact trends significantly. For example, the technology industry boom certainly helped the real estate industry in the 1990s. There was more demand for space—both commercial and residential—than ever before, and asset values skyrocketed. Unsurprisingly, the subsequent tech bust had a dramatic effect on some parts of the sector, as commercial firms that focused on office and retail development projects found the market glutted with available space.

The residential real estate market is also affected by economic swings, as unemployment and interest rates impact both consumer confidence and buying power. Although the U.S. economy was mired in recession for the first several years of the 21st century, the residential real estate market was one of the few bright spots. For example, in 2002, home sales shot up 8 percent and housing starts grew by 7 percent. The trend continued through 2005, when the real estate market was responsible for over \$2 trillion worth of national economic activity.

There were many reasons for this residential housing boom. The aging U.S. population and the influx of immigrants increased the demand for homes. The rockiness of the stock market made investing in real estate look very appealing, and the Federal Reserve played a big part as well. Lower mortgage rates and minimal inflation meant that in 2003, a 30-year home mortgage could be had at a minuscule 5 percent interest rate. The drop in mortgage rates meant that homeowners could refinance, freeing up more cash for them—and in the process making real estate look like an even more attractive investment.

The wealth wasn't spread equally, however. During the real estate boom that began after the end of the 1991 recession and reached its peak between 2002 and 2005, homes and apartments in the Boston to Washington corridor and California doubled, tripled and quadrupled in value—while in other parts of the country, even in fast-growing areas such as Las Vegas, gains were more modest. This was due in part to the simple fact that there was more available land on which to build houses and apartments. Profits aside, though, the residential real estate market's remarkable gains provoked fears among some economists and homeowners that the market bubble was about to burst. The prices of homes, especially on the coasts, outpaced the means of many prospective first-time buyers, and housing market worries fueled stock drops in late 2005.

Economists' fears were confirmed in 2006, when the so-called "housing bubble" finally burst. According to *The Wall Street Journal*, increases in mortgage rates coupled with a sluggish economy produced the first decreases in real estate values in years. In fact, average residential values fell for the first time since 1995, and are expected to continue to do so. Urban markets fell along with suburban ones; *Forbes* reported that 17 out of 26 metropolitan markets that made significant gains in the boom years (examples include San Diego, Providence and Boston) have all experienced losses. And even with falling prices, first and second home sales have decreased.

Of course, home sales are still making money, though the numbers are lower. Thomas Stevens, president of the National Association of Realtors (NAR), reported appreciation in values of less than 1 percent in September 2006. On the plus side, however, while some parts of the country continue to see home prices rising, the end of the bubble may indicate the beginning of a more equitable (and affordable) housing market.

And there is still plenty of business after the burst. For one thing, the August 2006 Pending Homes Index, a measure of pending residential sales, indicated that the market was stabilizing—that is, that while a further decline in prices is possible, these are holding steady for now; good news for buyers and sellers alike. Investing in real estate can still be lucrative, too: real estate fund values have been on the rise for the past five years, and outperformed the rest of the market in the third quarter of 2006. While this is partially due to the fact that the value of real estate funds, or REITs, is reliant on commercial rather than residential properties, it is nevertheless good news for the market as a whole. It's safe to say that, while real estate is subject to ups and down just like any other industry, it remains a fairly steady—not to mention lucrative—business.

Valuing Real Estate

There are three generally accepted approaches to valuing real estate: the sales approach, the cost approach and the income approach. Professional appraisers will reach a valuation after carefully considering each approach. You should make sure to review all three approaches before any real estate interview.

The sales approach

The sales approach arrives at a value for a property based on recent sales of similar properties. This approach can be used for both residential and commercial properties. There are proprietary databases that track home and commercial building sales, which make it easier for real estate professionals to access market information used in valuing properties. One of the most popular databases is the Multi-listing Service (MLS), which is used to track residential properties. The MLS contains useful information about homes, such as the sales history, tax records and property amenities that can be accessed for an annual fee. In the sales approach, appraisers will use databases, such as the MLS, to look for homes with similar characteristics (e.g. location and house specifics), as the subject property. For example, when valuing a four-bedroom, two-bathroom house in the Pacific Heights section of San Francisco, it is logical to value that property based on the most recent sales information for properties in the same area with similar characteristics. Bear in mind that no two properties are alike, so when valuing a property using the sales approach you must adjust for differences between the properties.

The cost approach

In markets where it is difficult to find similar properties, an appraiser can value a property based on the cost approach. This approach focuses on a few steps. First, you must determine the cost of replacing or reconstructing

the improvements or building. Next, the age of the improvements must be considered and an appropriate amount of depreciation is subtracted from the value of improvements. Finally, the value of the land must be taken into consideration. The land value is added to the improvements minus the estimated property depreciation. The cost approach is used for truly unique properties like churches, which cannot use either the sales or income approach to arrive at a valuation.

The income approach

The income approach is the most quantitative of the three approaches. The income approach involves the use of net operating income (NOI) in calculating the value of the property. (See the Appendix for a detailed explanation of Net Operating Income.) Think of NOI as the reason most investors buy a building. The investment community talks about NOI incessantly, so make sure to understand this concept if you plan on being involved with real estate investing.

There are two forms of the income approach. One form involves isolating NOI for one year, while the other form involves a longer time horizon. Both forms use a capitalization (cap) rate to calculate a value. The cap rate is a market mechanism, so don't worry about what goes in the calculation. Just be concerned with how it is used. In practice the cap rate is generally used in a formula with the NOI to arrive at a property value. For example, suppose you were buying an industrial facility whose net operating income in the following year was projected to be \$500,000. If you knew the market cap rate for similar properties, you could arrive an estimated value of the property. Assume the market cap rate for industrial facilities was 10 percent. To arrive at the value of the building, divide NOI by the cap rate. In our example, the value of the building would be:

$$\text{Value} = \frac{\text{NOI}}{\text{Cap Rate}} = \frac{\$500,000}{.10} = \$5,000,000$$

The yield capitalization form uses a longer time horizon. It involves calculating a discounted cash flow to arrive a property value.

$$\text{Value} = \frac{\text{NOI year } n}{(1 + \text{discount rate})^n} + \frac{\text{NOI year } n+1}{(1 + \text{discount rate})^{n+1}} + \frac{\text{residual value}}{(1 + \text{discount rate})^{n+1}}$$

In the example above, the numerator represents the cash flows that the building generates today and in the coming years, which theoretically provides a value for the asset. Note, that there is also a future residual value listed in the formula. The discount rate reflects the cost of capital. Your client may provide this cost, or you may have to estimate the discount rate based on similar transactions and knowledge of the market. The discount rate is necessary because it allows you to bring all the future cash flows back to today's dollars or present value (PV). The discount rate factors in the opportunity cost of money or the return that you could expect elsewhere with the cash flows. The exponent "n" in the denominator represents the period or number of years in the future that you would receive that cash flow. The DCF is calculated based on a stated number of years and adds up the PVs. At some point in the future cash flows you have a residual value because it is assumed the property is eventually sold. The residual value is calculated by taking the NOI of the year after the assumed time horizon and then dividing that year's NOI by an assumed cap rate. Some investors use different time periods when calculating the DCF but 10 years is the generally accepted period to value an asset. The DCF is normally used for income-producing property, while a single-family house is typically valued by the sales comparison approach.

Although there are different ways to value real estate, there are a few common variables such as location, the property's condition and market demand that make real estate valuable regardless of the asset type. There is a popular industry saying, "The three most important things in real estate are location, location, location." You simply cannot underestimate the importance of location. While you can restore and upgrade a property as much as you want, there is no substitute for being located close to: transportation, good schools, attractive retail and an aesthetically pleasing area. While location is important, keeping the property in good working order also creates value because it lessens the need to make improvements or contribute capital to the property. In addition, fundamental macroeconomics plays a major role in real estate values. For example, when interest rates offered by lenders are low, people will rush to buy a house to take advantage of the low financing costs. If this new market demand is greater than the market supply, property prices will increase.

The Real Estate MBA

One possible educational route into real estate is to get an MBA at an institution with a specific real estate program. Some of the best programs, based on U.S. News & World Report rankings, are Wharton, University of California-Berkeley's Haas Business School, MIT's Sloan School of Management, University of Wisconsin-Madison and Ohio State University's Fisher School of Business. These schools also have strong real estate clubs that produce annual conferences and other activities.

Job Seeking Advice for Real Estate MBAs

Joseph Pagliari, a clinical assistant professor and director of the Real Estate Center at the Kellogg School of Management, says, "There are host of opportunities in real estate for MBAs. The issue is identifying the best fit for the candidate. Positions that are good fits for MBAs are with firms that supply capital to the industry. Typically these are large, sophisticated, financially-oriented firms. MBAs should identify these institutions and aggressively pursue them for employment. In today's marketplace, this means looking at REITs, mezzanine funds (funds built around mezzanine financing, which combines equity and fixed income investments) and private equity firms.

"In general the high profile real estate positions and financially rewarding jobs are on the capital side," adds Pagliari, who is also a principal of a real estate investment firm. "These jobs are almost self-selecting because they are tough to get and you have to be smart and aggressive to succeed. Given that positions in the capital side of the business are reserved for the elite, MBAs should pursue these positions because many of them possess the necessary qualities for these roles."

Employers look for a variety of skill sets. "It is difficult to narrow it to just a few things," he says. "Some positions are very quantitative while others emphasize strong interpersonal skills. Having a combination of both is a competitive advantage. In general, I tell all my students to look for roles that speak to their skill sets. It is going to be hard enough to get the interview, so don't blow it by going after a job that probably doesn't fit your background. MBAs should do their homework on the types of roles out there and match your background and interest with the best fit. However, you still want to shoot for the sky and leverage your MBA."

Job seekers shouldn't be shy about using their contacts "This industry is very tough for outsiders or newcomers to break into and students should be ready to accept that," he advises. "Get in the hunt as soon as possible and network, network, network. Using alums or anyone else you know in the industry is something I always recommend." When you have the interview, be prepared to talk about the local market—or any other in which the company operates. If it's a public firm, check The Wall Street Journal for the scuttlebutt. Also, be certain they'll welcome your MBA.

"In the interview you will most likely be asked about why you are interested in real estate and a few technical questions," Pagliari warns. "Be ready to describe a cap rate and market specifics like rental rates and general economic conditions."

To MBA students just starting a real estate program who know they want to enter the industry, he stresses, "Don't rely on simply taking real estate classes, especially if you have no prior real estate experience." You need to demonstrate passion by joining a real estate club or getting active in real estate-related activities at school. "Do whatever it takes to be able to demonstrate your enthusiasm for the industry," he adds. "If it takes starting a real estate club or being the driving force behind an event, then so be it."

The professor also advises individuals who are evaluating MBA programs that offer real estate curriculums to: make sure the professors have some practical experience and the curriculum will give you a skill set that will meet your end goal. Don't sacrifice the overall MBA experience for a school that simply offers a strong real estate curriculum and is lacking in other areas.

For MBA students who are interested in real estate but whose programs do not offer real estate classes, Pagliari offers a solution. "Classes related to finance and economic principles that help you price risks are very useful," he says, noting that the ability to price risk is a strong differentiating factor. Pagliari also recommends taking business law classes because there are many legal issues involved in the industry. "Which is why you should not be surprised to find so many attorneys in the business," he says.

"I was a career switcher and was repeatedly asked in interviews about why I was interested in real estate," says Rich Monopoli, a recent graduate from business school. "Many of the interviewers wanted an explanation of how my background tied to my interest in real estate. I can't emphasize enough how important it is to be prepared to answer the question of why you are interested in real estate."

This section was excerpted from the *Vault Career Guide to Real Estate*. Get the inside scoop on on real estate careers with:

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Archstone-Smith

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Fax: (617) 536-5087
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Fax: (415) 974-4550
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Fax: (310) 606-4701
www.cbre.com

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Phone: (423) 855-0001
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www.century21.com

CNL Hotels & Resorts, Inc.

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Fax: (407) 650-1085
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Day & Zimmermann Group

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www.dayzim.com

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Beachwood, OH 44122
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www.ddrc.com

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Fax: (312) 454-0332
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Equity Residential

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Fax: (312) 454-8703
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Fax: (972) 444-4949
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Cleveland, OH 44113-2203
Phone: (216) 621-6060
Fax: (216) 263-4808
www.forestcity.net

General Growth Properties, Inc.

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Fax: (312) 960-5475
www.generalgrowth.com

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www.hptreit.com

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Fax: (240) 744-5125
www.hostmarriott.com

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Red Bank, NJ 07701
Phone: (732) 747-7800
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Phone: (617) 332-3990
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Chicago, IL 60601
Phone: 312-782-5800
Fax: 312-782-4339
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Los Angeles, CA 90024
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Fax: (310) 231-4222
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Fax: (516) 869-9001
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Sydney, 2000, Australia
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www.lendlease.com.au

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Fax: (703) 524-2689
www.mccormickgroup.com

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Fax: (703) 812-7255
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Sacramento, CA 95834
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www.metrolistmls.com

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www.pky.com

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Greenwood Village, CO 80111
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Fax: (303) 796-3599
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San Francisco, CA 94111
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Fax: (415) 398-1905
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Sales and Trading

The War Zone

If you've ever been to an investment banking trading floor, you've witnessed the chaos. It's usually a lot of swearing, yelling and flashing computer screens: a pressure cooker of stress. Sometimes the floor is a quiet rumble of activity, but when the market takes a nosedive, panic ensues and the volume kicks up a notch. Traders must rely on their market instincts, and salespeople yell for bids when the market tumbles. Deciding what to buy or sell, and at what price to buy and sell, is difficult when millions of dollars are at stake.

However, salespeople and traders work much more reasonable hours than research analysts or corporate finance bankers. Rarely does a salesperson or trader venture into the office on a Saturday or Sunday; the trading floor is completely devoid of life on weekends. Any corporate finance analyst who has crossed a trading floor on a Saturday will tell you that the only noise to be heard on the floor is the clocks ticking every minute and the whir of the air conditioner.

Shop Talk

Here's a quick example of how a salesperson and a trader interact on an emerging market bond trade.

SALESPERSON: Receives a call from a buy-side firm (say, a large mutual fund). The buy-side firm wishes to sell \$10 million of a particular Mexican Par government-issued bond (denominated in U.S. dollars). The emerging markets bond salesperson, seated next to the emerging markets traders, stands up in his chair and yells to the relevant trader, "Give me a bid on \$10 million Mex Par, six and a quarter, nineteens."

TRADER: "I got 'em at 73 and an eighth."

Translation: I am willing to buy them at a price of \$73.125 per \$100 of face value. As mentioned, the \$10 million represents amount of par value the client wanted to sell, meaning the trader will buy the bonds, paying 73.125 percent of \$10 million plus accrued interest (to factor in interest earned between interest payments).

SALESPERSON: "Can't you do any better than that?"

Translation: Please buy at a higher price, as I will get a higher commission.

TRADER: "That's the best I can do. The market is falling right now. You want to sell?"

SALESPERSON: "Done. \$10 million."

S&T: A Symbiotic Relationship?

Institutional sales and trading are highly dependent on one another. The propaganda that you read in glossy firm brochures portrays those in sales and trading as a shiny, happy integrated team environment of professionals working for the client's interests. While often that is true, salespeople and traders frequently clash, disagree, and bicker.

Simply put, salespeople provide the clients for traders, and traders provide the products for sales. Traders would have nobody to trade for without sales, but sales would have nothing to sell without traders. Understanding how a trader makes money and how a salesperson makes money should explain how conflicts can arise.

Traders make money by selling high and buying low (this difference is called the spread). They are buying stocks or bonds for clients, and these clients filter in through sales. A trader faced with a buy order for a buy-side firm could care less about

the performance of the securities once they are sold. He or she just cares about making the spread. In a sell trade, this means selling at the highest price possible. In a buy trade, this means buying at the lowest price possible.

The salesperson, however, has a different incentive. The total return on the trade often determines the money a salesperson makes, so he wants the trader to sell at a low price. The salesperson also wants to be able to offer the client a better price than competing firms in order to get the trade and earn a commission. This of course leads to many interesting situations, and at the extreme, salespeople and traders who eye one another suspiciously.

The personalities

Salespeople possess remarkable communication skills, including outgoing personalities and a smoothness not often seen in traders. Traders sometimes call them bullshit artists while salespeople counter by calling traders quant guys with no personality. Traders are tough, quick, and often consider themselves smarter than salespeople. The salespeople probably know better how to have fun, but the traders win the prize for mental sharpness and the ability to handle stress.

The MBA in S&T

Do I need an MBA to be promoted on a sales and trading desk?

Generally, sales and trading is a much less hierarchical work environment than investment banking. For this reason, it is widely believed that you don't need an MBA to get promoted on sales and trading desks. This view is often perpetuated by people who work on trading desks, but just because you hear this once or twice, don't accept it as truth. Whether you need an MBA or not is really a function of the firm you work for and the desk you're on. If the firm you're considering hires both associates and analysts, but you notice that associates are offered twice as much pay as analysts, then this is certainly an indication that MBAs are better paid. This doesn't mean that you can't be promoted without an MBA; you'll just have to work much harder to get recognized. When it's time for a promotion, you may also be somewhat behind in the pecking order. Some firms, on the other hand, don't want MBAs. This may result from budgetary constraints, or explicit firm policy. Some firms also hold the view that it's hard to teach an old dog new tricks, so they will hire exclusively out of undergraduate programs.

A more subtle point to discern are the desk dynamics. A lot about being on a trading desk is about fitting in, and if everyone else, including the boss, doesn't have an MBA, then chances are that having an MBA won't add too much value in this environment. In fact, an MBA degree may even hurt your career prospects if there's a downright disdain for MBA-types. Alternatively, if the desk you're on is populated with MBAs, then not having an MBA could potentially limit your career advancement. Alternatively, you can be in a situation where you're the only MBA and everyone thinks that you're the brain, which can work to your advantage even if the boss has no personal biases about the value of the degree.

The bottom line is that there are no hard and fast rules. Depending on the particular firm and desk, an MBA may not advance your career. Be aware of the aforementioned issues, and ask some good questions to get a better feel for whether an extra degree is a benefit.

What are some of the tangible benefits of an MBA?

The pay is better and you will generally have a faster track for promotion to salesperson or trader. The MBA associate will typically have to do the same demeaning things that an undergraduate analyst does, but mercifully for a shorter period of time. In some cases, MBAs are also more likely to be assigned the desk that they'd like to work for. Undergraduate sales and

trading recruiting programs, on the other hand, may hire you as part of a generalist pool and place you on a desk that isn't your top choice.

Another tangible benefit for the MBA candidate is the availability of more exit options.

A Day in the Life: Sales-Trader

Here's a look at a day in the life of a sales-trader, given to us by an associate in the Equities division at Lehman Brothers.

6:30 a.m. Get into work. Check voice mail and e-mail. Chat with some people at your desk about the headlines in the Journal.

7:15 a.m. Equities morning call. You find out what's up to sell. ("I'm sort of a liaison between the accounts [clients] and the block traders. What I do is help traders execute their trading strategies, give them market color. If they want something I try to find the other side of the trade. Or if I have stuff available, I get info out, without exposing what we have.")

9:30 a.m. Markets open. You hit the phones. ("You want to make outgoing calls, you don't really want people to call you. I'm calling my clients, telling them what research is relevant to them, and what merchandise I have, if there's any news on any of their positions.")

10:00 a.m. More calls. ("I usually have about 35 different clients. It's always listed equities, but it's a huge range of equities. The client can be a buyer or seller—there's one sales-trader representing a buyer, another representing the seller.")

10:30 a.m. On the phone with another Lehman trader, trying to satisfy a client. ("If they have questions in another product, I'll try to help them out.")

11:00 a.m. Calling another client. ("It's a trader at the other end, receiving discussions from portfolio manager; their discretion varies from client to client.")

12:00 p.m. You hear a call for the sale for a stock that several of your clients are keen on acquiring. ("It's usually a block trader, although sometimes it's another sales-trader. The announcement comes 'over the top,'—over the speaker. It also comes on my computer.")

12:30 p.m. Food from the deli comes in. (You can't go to the bathroom sometimes, say you're working 10 orders, you want to see every stock. We don't leave to get our lunch, we order lunch in.)

1:00 p.m. Watching your terminal ("There's a lot of action. If there's 200,000 shares trade in your name [a stock that a client has a position in or wants] and it's not you, you want to go back to your client and say who it was.)

2:00 p.m. Taking a call from a client. ("You can't miss a beat, you are literally in your seat all day.")

2:05 p.m. You tell the client that you have some stock he had indicated interest in previously, but you don't let him know how much you can unload. ("It's a lot of how to get a trade done without disclosing anything that's going to hurt the account. If you have to one stock is up you don't want the whole Street to know, or it'll drive down the price.")

4:30 p.m. Head home to rest a bit before going out. ("I leave at 4:30 or sometimes 5:00. It depends.")

7:00 p.m. Meet a buy-side trader, one of your clients, at a bar. ("We entertain a lot of buy-side traders—dinner, we go to baseball games, we go to bars. Maybe this happens once or twice a week.")

MBA Career Path

First-year MBA students and recent MBA graduates are eligible for summer associate and full-time associate positions respectively. Associates start with similar responsibilities as analysts, but add more responsibility quickly and are typically on a faster track for promotion.

MBAs are also more likely to have the opportunity to get staffed abroad. For example, Goldman Sachs, Morgan Stanley and Lehman Brothers have recently hired MBAs from American business schools directly into their European trading desks. MBAs interested in pursuing sales and trading opportunities abroad must be able to demonstrate local language proficiency, and a strong desire to make a long-term commitment to the region. Each of these firms has recently also offered summer internship opportunities, but these programs are less established than the New York-based opportunities, and therefore shouldn't be counted on as a stable source of MBA hiring demand.

Associate pay: To infinity and beyond

Sales and trading associates will start at about the same base pay as their investment banking counterparts. The going rate has held up around \$80,000 to \$85,000 per year plus an end of year bonus of \$20,000 to \$30,000. While signing bonuses were the norm during the bull market of the late 1990s, they are now rare. Salaries increase primarily through performance bonuses, especially if you've become a position trader for the firm. Bonuses are normally computed as a percentage of the trading revenues you generate (or commission dollars that you generate if you're a salesperson), so depending on how cheap or generous your firm is, this number can be normally expected to fluctuate between 0 percent and 10 percent in any given year.

If you make \$10 million for the firm, however, don't expect to receive a cool million for your efforts. Wall Street firms are highly conscious of expense control, and the largest expense item is compensation. To keep compensation expense at or below 50 percent of revenues, investment banks hand out compensation packages that include among other things, cash, stock options and restricted stock. Generous stock option grants are a non-cash form of compensation that doesn't hit the income statement, but aren't quite as motivating as cash. Another game in the compensation is the granting of restricted stock. This is a major component of pay as you move up the ladder, and you can only convert this compensation into cash according to a vesting schedule that stretches out for years.

Finally, keep in mind that investment banks are operating across all markets and products sectors. In a simplified world, the investment bank operates a bond desk and an equity desk. The bond traders make more money and the salespeople sell more bonds when the economy is in recession. On the other hand, the stock traders make more money and the sales traders sell more stock when the economy is robust. What happens at the end of the year when the compensation committee is determining how big the bond bonus pool and the equity bonus pool should be? Most firms tend to cross-subsidize the equity desk with the bond desk's revenues when the stock market falls on hard times, and to return the favor to the bond desk when the bond market falls on hard times. This makes sense at the corporate level (preventing mass defections, for example), but the immediate consequence to the stock trader that generated \$10 million in revenues and is expecting a \$1 million check is that he'll see a lot less than \$1 million. The small consolation to the expectant stock trader is that when he makes substantially less than his budget, maybe the bond desk will stuff his stocking.

The winding promotion road in S&T

The path to promotion on a sales and trading desk is less standard than it is in investment banking. Investment banking analysts really don't have much to look forward to except perhaps a third year and then back to business school or some other career. By contrast, undergraduate analysts who have a demonstrated ability to add value to a desk have the potential to move up without an MBA.

One common scenario that unfolds is that after several years, the restless undergraduate analyst decides to apply to business school and gets accepted. If this analyst is a prized employee, then the boss might offer the analyst a promotion to associate in order to keep the analyst on the desk.

Promotions on trading desks are generally not much to celebrate, except that it leads to potentially higher pay. Investment banking associates can look forward to moving out of the bullpen and into a real office with a secretary. Salespeople and traders settle for better accounts and more trading responsibility. The focus of promotions shouldn't be to achieve a particular title (vice president, director, managing director etc.), but rather, to earn real sales and trading responsibility. Of course if you do your job well, you'll be duly compensated and promoted, but after reaching a level of significant responsibility, you shouldn't be expecting to get promoted every couple of years.

**This section was excerpted from the *Vault Career Guide to Sales & Trading*.
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Technology Consulting

The State of Technology Consulting

The IT factor

After sizable industry gains in the 1990s, consulting firms—especially in the technology sector—suffered crushing blows in the stock market bust of 2000-2001 and the ensuing recession and corporate cutbacks that persisted through 2003. IT spending, viewed by many corporations as a luxury, not a necessity, was often the first item slashed from budgets. Since 2004, though, as businesses recovered from the downturn and revenues started climbing, companies unfroze their hold on IT improvements and turned to tech consultants to bolster their performance and efficiency.

While things are now heading in the right direction for IT consulting firms, they're not out of the woods yet. Lower-than-expected earnings in early 2005 sparked worries in the industry regarding the pace of technology spending. In 2004, Forrester Research predicted that IT consulting will grow at a 5 percent annual rate from 2003 through 2008, and *Management Consultant International*, a newsletter produced by Kennedy Information, forecasts that the consulting industry will experience only modest growth through 2007 due to the conservative pace of spending on IT consulting.

A nip and a tuck

The slow rebound in IT spending since 2004 has forced tech consulting firms to rethink their service offerings and innovation strategies. One way some have adapted to the market is by muscling their way into the arena of management consulting, bringing the two disciplines together under one roof. EDS was one of the pioneers of this approach, acquiring A.T. Kearney in 1995 (though A.T. Kearney completed a management buyout from EDS in January 2006), followed by the 2002 acquisition of KMPG Consulting by Atos Origin and PwC Consulting by IBM in 2003. These firms maintain that the convergence trend reflects today's business environment in which technology and business strategy are inherently linked. They claim that businesses are looking for firms that can identify client needs, execute a particular IT strategy, install the system and then stay on board to provide turnkey services that include day-to-day management of the client's computer department and/or other departments. Others contend that some clients are wary of awarding an entire project to a specific firm and prefer to use separate vendors for business strategy and IT implementation.

Shoring up revenues

Another way companies are coping with reduced tech spending is by taking advantage of offshoring opportunities. While companies have been outsourcing technical work to India for nearly two generations, the practice really took off during the recession of the early 21st century, when companies were determined to cut costs. Indeed, offshoring has become just another business strategy for profitability and growth, rendering it a necessity for maintaining a company's competitive advantage in the market. A January 2006 article in *BusinessWeek* magazine cites McKinsey Global Institute in estimating that, to date, \$18.4 billion in global IT work and \$11.4 billion in business process services have been shifted abroad. The latest Quarterly Index from sourcing advisory firm TPI reports that although the average value of outsourcing contracts in 2005 was 24 percent lower than those in 2004, the number of outsourcing contracts continues to rise—up 11 percent from 2004—reflecting increased competition and expansion in the marketplace. In addition, a considerable number of first-generation offshoring contracts, awarded in the last seven to 10 years, are now up for renewal. Of these, TPI notes that there were \$43.8 billion in renewals in 2005, and expects to see \$49 billion in 2007.

Dissenting opinions

Although offshoring has proven to be a viable force in generating financial returns to U.S. companies, it has also been a frequent subject of hot debate. Some industry observers are concerned with offshoring's impact on traditional consulting, saying that the prevalent outsourcing model—which groups consulting services into larger outsourcing engagements—has depressed the prices of traditional consulting services and, in a sense, commoditized the business. The main concern becomes cost-savings, as opposed to selling value that can differentiate one provider from the next. Another major concern for those opposed to offshoring is that outsourcing jobs will hold down IT job growth and salaries; Forrester Research projects that IT jobs will grow slowly, at an annual rate of 3 percent through 2008, with salaries growing only 6 percent during that period.

Those in the pro camp suggest that offshoring is a win-win game. It frees up resources that can be used to generate high value, and companies can invest their savings from offshoring into new, more productive initiatives at home. For American IT consulting outfits, the rush to open offshore facilities has emerged as a competitive necessity, reducing IT spending and improving the overall corporate bottom line. As for the loss of jobs, any turnover generated by outsourcing is viewed as part of the natural flow of economic activity. These jobs will be replaced by others that will emerge when companies invest their savings from offshoring into new ventures.

Regional palates

Until recently, India has been the primary receptacle for U.S. offshoring pursuits. The country's large talent pool boasts a heavy concentration of IT consultants and an ever-ready supply of Indian recruits waving MBAs. Billing rates for skilled IT consultants are among the lowest in the world, and competition has grown rampant within the country as the leading outsourcers—Infosys, Tata, Wipro—compete head-to-head with big-league American consulting firms like IBM and Accenture for local IT development centers employing Indian engineers. Consequently, wages for mid-level employees are on the rise, and companies are offering attractive incentive plans to boost retention. With these increased wages and geographic diversification away from India, the nation's IT outsourcers have been forced to focus on emerging markets to capture cost efficiencies and market share.

Rising costs in India have encouraged consulting firms to look elsewhere for cut-rate offshoring opportunities. Countries such as China, Malaysia, Australia and New Zealand are becoming attractive locations for cost-efficient IT development centers. In fact, Kennedy Information predicts that the Chinese consulting market will prove to be heady competition for India, growing at a compound annual rate of 32 percent from 2005 to 2008, with India lagging behind at 24 percent. Demand for consultants in China is now on the rise, though the biggest challenge to growth in the country is the difficulty of training and retaining skilled labor. There are far fewer Chinese recruits wielding MBAs than there are in India. It can take up to 10 years to train a consultant and, once trained, many talented Chinese consultants opt for more lucrative positions with Western consulting firms.

Seeking specialists

With corporate America spending money on technology again, the IT job market has sprung back to life. According to Moody's Economy.com, some 125,000 tech jobs were created in 2005, with 217,000 jobs predicted for 2006—what promises to be the industry's best year since 2000. Technology consultants comprised 34,000 of those positions, a number that's expected to grow in 2006. The job market for consultants is now candidate-driven: Recruiters are having difficulty attracting enough talent to meet their hiring targets, putting candidates in advantageous negotiating positions when faced with competing job offers. The health of the industry is also evident in the upturn in voluntary turnover, which, according to *Consultants News*, reached 25 percent in 2005.

Now more than ever, clients are demanding expertise in a particular industry or functional area, and the need for generalist consultants is in decline—a trend that has taken hold in the past few years. The small size of the talent pool for specific

operational issues, such as Sarbanes-Oxley regulation and national defense, coupled with heightened demand from consulting firms has caused salaries for specialists to spike.

Practice Areas

Systems integration

This is one of the traditional jobs of tech consultants, and a growth area today as companies augment their business processes with complex IT systems. When two companies merge, or a single company wants to implement new hardware or software, they turn to consultants to make all of the technology compatible. Sometimes this is a simple matter of installing upgrades or changing settings; more often, it's a long and arduous process of writing new code to allow hardware and existing software to co-exist and operate efficiently together.

Outsourcing

Another long-time area of tech consulting expertise, business process outsourcing (BPO) is the bread and butter of many firms. Some companies find it easier and more cost-effective to pay somebody else to manage their technology for them, positioning consultants, in effect, as the client's IT department. Consultants handle everything from help desk and call center operations to server maintenance and passkey and ID tag issuance. Even governments and armies outsource nowadays; CIBER has a number of contracts with the U.S. Army Reserve's Regional Support Commands and the U.S. Marine Corps and Navy, while Computer Sciences Corporation has outsourcing deals with the UK, Germany's armed forces and Australia.

Enterprise solutions

A major impact of the Enron (2001) and Worldcom (2002) accounting scandals was the summer 2002 passage of the Sarbanes-Oxley Act. SOX mandates that companies publicly listed in the U.S. market conduct internal audits, provide more detailed financial information to investors, and store financial data for a specific period of time. Many companies initially thought they could manage the IT implications of SOX on their own, and it has taken a couple of years for huge SOX-compliance IT contracts to become commonplace. Companies have found that they need vastly improved data storage, records management and security systems to maintain confidentiality of their newly prodigious amounts of financial information, in addition to process management software systems to facilitate audit, tracking and reporting requirements.

SOX compliance is just one of the major types of consulting that is generally bundled into the "enterprise solutions" category. Supply chain consulting, for example, is an even larger piece of the pie. Supply chain consultants help client companies streamline parts and materials ordering processes and reduce manufacturing input costs. Supply chain projects can focus on inventory reduction, throughput enhancement and manufacturing cost containment. Enterprise resource planning (ERP) is an extension of supply chain management that further integrates product planning, customer service, order tracking, finance and HR processes.

Customer relationship management (CRM) systems received a lot of hype in the late 1990s, only to be hit hard by an economic downturn that meant that even the most sophisticated CRM system wasn't going to grow in sales. CRM consulting engagements involve developing organized and efficient ways for clients to manage relationships, usually through a complex software solution that facilitates storing and mining large amounts of customer data.

IT strategy

IT consulting engagements that involve a broad view of the client's business or high-level tech decisions are often simply referred to as "consulting" or "strategy" projects. These engagements often entail aligning a client's IT infrastructure with its overall business strategy. Most of the large, brand-name management consulting firms have IT strategy practices, including Booz Allen's technology strategy group and Accenture's Strategic IT Effectiveness (SITE) group, which resides within its

business consulting division. These IT strategy consulting groups are often managed by industry specialists (e.g., utilities, financial services) who are deeply familiar with the specific information challenges faced by potential clients.

Many IT strategy engagements fall into the category of business process reengineering (BPR). When a company decides to purchase a new software package, or simply to improve its business processes, the result is not simply a new IT system, but usually a dramatic shift in the way employees interact. BPR assignments involve rewriting work rules and shaping communication paths, calling upon consultants' general business know-how over technical computer knowledge.

Web services

Long the domain of design and hosting companies based in Silicon Alley (New York's tech center), Web services include e-commerce implementation and other secure-transaction work, though consultancies do some page design and site hosting as part of their overall deliverables as well. This specialty is receiving a lot of attention from major technology players such as IBM, HP and Accenture. Gartner predicts that Web services spending will reach \$14.3 billion in 2006.

Security

Five years after the September 11 terrorist attacks and the resulting heightened awareness of security threats to U.S. residents and businesses, information security consulting work is still a hot area. IT businesses have realized there's money to be made in designing and implementing better security and identification methods. The industry has seen progress in biometrics (the science of identifying a person via retina patterns, voice, fingerprints and other unique biological characteristics), contraband detection and secure communications.

Research and development

Some consultants spend their time in the lab developing new hardware and software. Often, this work is geared toward creating new products (such as servers and analysis software) that will help companies sell work and accomplish engagements.

A Day in the Life: IT Consultant

Kristine is a consultant at a major consulting firm with many IT consulting engagements. Her role is Team Lead of the design and developer for eight Web-based training modules. She has five analysts on her team.

4:30 a.m.: It's Monday morning. Time to wake up. There's time for a shower this Monday morning—such luxury!

5:30 a.m.: I am in a cab on the way to the airport, making a mental list of anything that could have been forgotten. I ask the cabbie to tune the radio to NPR.

6:10 a.m.: At the airport I go up to the self check-in kiosk. I take the boarding pass and head down to the security line, laptop and small carry-on in hand.

6:25 a.m.: At security, I remove my laptop from my bag and place it on the tray. I move through security quickly. No alarms beep.

6:35 a.m.: After a quick stop at Starbucks, I arrive at the gate. I say hello to three other members of my project and check out the other passengers I see every week on this Monday morning flight. I board early along with the other premier fliers—one of the perks of being a frequent traveler.

7:00 a.m.: The flight departs on time. Yay! I relish my window seat close to the front of the airplane.

8:00 a.m.: The beverage cart wakes me up. I ask for coffee and scan *The Wall Street Journal* as I drink.

9:30 a.m.: I arrive at my destination and share a ride with my fellow consultants to the project site.

10:30 a.m.: At the project site. As I crawl underneath my desk to hook my laptop to the client LAN connection, one of my team members informs me that he still hasn't received feedback from his client reviewer. That's not good news.

11:00 a.m.: After checking and responding to e-mail, I call my team member's client reviewer. The reviewer agrees to send me the team member feedback on the training material by noon tomorrow.

11:15 a.m.: I remind the team of the 1 p.m. status meeting. I've got to start it on time—I have a meeting downtown at 3:15 p.m. I start to review the content outlines for the training modules.

12:00 p.m.: I scurry, along with two teammates, to get sandwiches at a nearby eatery. Mine is turkey and cheddar.

12:20 p.m.: Back at my desk, I get a call from the project manager, who is working at a client site in another state. He tells me that clients in the training department are nervous about their job security and asks that the entire team be sensitive to how the training changes may affect the training positions in the organization.

1:00 p.m.: The team holds a status meeting. I pass on the message from the project manager. Each member discusses what has been completed and what he or she expects to complete that week. Two other team members are having difficulty obtaining feedback from their client reviewers. We all brainstorm ideas on how to obtain the feedback.

2:00 p.m.: I finish up the meeting and get directions to my meeting downtown.

2:40 p.m.: Off to the 3:15 p.m. meeting.

3:15 p.m.: I meet the head of the training department to discuss the training courses. He calls in a close associate who has opinions on how the courses should be organized. The associate wants to add several more Web-based training modules. I politely suggest that part of the additional subject matter could be covered in the modules that have been agreed to in the scope of the project. We all sketch out the course structure on a white board.

4:45 p.m.: Back at the project site. I check in with my team members via e-mail.

5:45 p.m.: I complete a draft of the course flow in PowerPoint and send it to the client and my manager for review.

7:00 p.m.: I have reviewed 50 percent of the course outlines. It's time to head back to the hotel. I stop by a local diner for a quick dinner.

8:30 p.m.: Time for a workout in the hotel gym.

9:15 p.m.: I'm ready for bed. Clothes for the next day are hanging in the closet. The alarm clock is set to 6:30 a.m.

10:30 p.m.: I go to sleep.

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Telecommunications

Telecom Industry Overview

We're all connected

In simpler times, the word “telecommunications” might conjure an image of a telephone—and not much else. These days, though, telecom is an industry encompassing everything from local and long-distance phone service to wireless communication, Internet access, and cable and digital TV. In the U.S., total telecom spending reached more than \$856 billion in 2005, and is expected to surpass the \$1 trillion mark by 2009, according to the Telecommunications Industry Association (TIA). In the world at large, the TIA predicts telecom spending, estimated at \$1.8 trillion in 2005, to reach \$2.7 trillion by 2009.

The bell tolls for AT&T

Established in 1877 as American Bell, AT&T enjoyed the largest share of the telecom industry pie for nearly a century, thanks to the government's belief that the utility constituted a “natural” monopoly. That monopoly crumbled in 1969, when the Federal Communications Commission (FCC) allowed other companies—such as MCI, which was quick to get in the game—to play in Ma Bell's sandbox. But monopolies don't disappear overnight: to encourage competition in the long-distance market, the Department of Justice (DOJ) followed up with an antitrust suit against AT&T in 1974, resulting in the company's division into a long-distance retailer and seven regional Bell operating companies (RBOCs, or “Baby Bells”), which would compete in the local call market as independent local exchange carriers (LECs). The final breakup of AT&T took place in 1984.

The industry thrived after the breakup, exploding into hundreds of smaller competitors, lowering the cost of long-distance calling dramatically. AT&T, which held about 70 percent of the market in 1984, controlled only a third in 2005, but bounced back following its buyout by SBC to once again become the biggest kid on the playground. Still, it's these so-called “Tier 1” carriers—AT&T, Sprint Nextel and Global Crossing—that make up the bulk of the long-distance market.

Untangling the wires

As the long-distance market diversified, the local exchange market remained relatively homogenous. The Telecommunications Act of 1996 aimed to change that by deregulating entry into local markets and requiring that the Baby Bells, or incumbent local exchange carriers (ILECs), retail their network elements to smaller competitors. The incumbents were required to unbundle their networks for reasonable prices, with the goal of decentralizing the system into a “network of networks.” The act also temporarily blocked an RBOC from entering the long-distance market until it could prove sufficient competition in its local territory.

Another provision of the Telecom Act, allowing RBOCs the right to sell cable television services and phone equipment, proved to be a boon for the strongest RBOCs. Thanks to those services and the entry of the Baby Bells into long distance, the Act actually had the opposite of its intended effect, allowing a few RBOCs to solidify their positions and dominate the market through mergers and acquisitions. Today, there are just three RBOCs—Verizon, AT&T and Qwest—that dominate both local phone service and the burgeoning DSL (digital subscriber line) markets. Until recently there were five such companies, but the market contracted in 2005 as SBC took over AT&T (keeping the latter's name), and in March 2006 as the new AT&T announced it would purchase BellSouth.

Still, sniping among the RBOCs and long-distance giants like Verizon and AT&T over network access rights continues. As late as May 2004, the FCC was engaged in a dispute between the Baby Bells and the long-distance carriers, as the latter lobbied for increased access to local calling networks.

Not just at home

The dealmaking wasn't limited to America's shores. Telecom became truly global in 1997, when 70 member countries of the World Trade Organization (WTO)—which together control 90 percent of worldwide telecom sales—agreed to open up their telecom markets to each other at the start of the following year. Nearly all telecom companies around the globe had privatized in anticipation of this expanded level of competition. The accord led to a rush of international deals, especially in the world's second-largest telecom market, Japan. In 1999, British Telecommunications and AT&T partnered to acquire a 30 percent stake in LD operator Japan Telecom, combining their Japanese ventures under JT. A few months later, Britain's Cable & Wireless bought Japan's No. 6 carrier, IDC, and in 1999, Global Crossing teamed up with Marubeni to build a brand new network, called Global Access, to service Japan.

Wall Street highs and lows

As mergers and acquisitions activity heated up, Wall Street took notice: investors poured \$1.3 trillion into telecom companies in the five years following passage of the Telecom Act, according to *Forbes* magazine. But with this activity came increased scrutiny and risk. Ultimately, the industry was subject to the same meltdown that hit the rest of the tech sector beginning in late 2000. Again according to *Forbes*, the industry's market value plummeted by \$1 trillion after the Dow took its dive. Mergers also fell by the wayside: in July 2000, a proposed merger between Sprint and WorldCom fell through when the Justice Department filed a lawsuit that attempted to block the deal. The prospect of a lengthy DOJ suit effectively killed the merger, and it may similarly discourage future unions.

Cooking the books

Compounding the gloom, a number of major telecoms had high-profile problems in their accounting departments. The biggest offender was WorldCom, which ran afoul of the feds in 2002. WorldCom filed for the largest bankruptcy in U.S. history in July of that year, racking up \$41 billion in debt and an estimated \$11 billion in fraudulent expenses—leading to a \$100 billion loss to shareholders. Even as the company attempted a rebound, emerging from bankruptcy in April 2004 with a lighter debt load, a moderately healthy outlook and a less tarnished name (the company had reverted to the MCI brand), it had to contend with scores of class-action lawsuits. Former CEO Bernard J. Ebbers also faced a growing list of federal fraud and conspiracy charges. In March 2005 Ebbers was found guilty on all counts, and was sentenced to 25 years in prison. Accounting firm Citigroup, which had conspired with WorldCom, announced in May 2004 that it would pay \$2.65 billion to investors for its role in the scandal. Two years later, the beleaguered company was virtually no more, having been gobbled up by Verizon in a deal worth \$8.5 billion.

In addition to WorldCom, about a half-dozen other providers of telecom services began Chapter 11 bankruptcy proceedings in 2002, dumping customers and employees as they went. In 2003, Sprint reorganized into separate business and consumer units in an effort to save \$1 billion.

Can you hear me now?

It is a truth universally acknowledged that every person in possession of relatively good fortune must have a cell phone, or at least want one. The fact that the \$174 billion American wireless market is growing by leaps and bounds and posting

double-digit gains backs this up. U.S. wireless revenue increased more than 10 percent in 2005, and the industry plans on its reaching \$265 billion by 2009.

The wireless market outpaced long distance for the first time in 2003, according to TIA number crunchers (LD posted \$78 billion in spending to wireless's \$89), the same year that the number of wireless users was estimated to be above 1 billion worldwide. By 2005 industry analysts reckoned that some 194 million people in the U.S. had a wireless phone, and projected that 270 million people would have one in 2009.

The wireless boom heralds renewed business activity in telecom. Competition began to sizzle in late 2003, as the first phase of a federal law allowing "portability"—a.k.a., letting consumers retain their mobile phone numbers when switching carriers—took effect. One notable event was Cingular's \$41 billion purchase of rival AT&T Wireless, announced in February 2004, following a fierce bidding war with Vodafone. Just to show how complicated the industry's family ties are, Cingular happens to be owned by rival Baby Bells—though these huge conglomerates can't really be called "baby" anymore—AT&T and BellSouth (which former is in process of purchasing the latter); while competitor Verizon Wireless is a joint venture between Verizon and Vodafone.

Deals kept perking right along as Sprint merged with Nextel in August 2005, when the companies were, respectively, the No. 3 and 5 wireless carriers. Though the present company is one of the largest telecoms in the world, it's still No. 3 in the U.S. by number of subscribers behind Verizon and Cingular.

Wireless—if not VoIP; see below—is the wave of the future: while landlines were once seen as a source of dependable revenue and a way to spread risk, wireless companies have recently been setting up their landline units on their own and seeing them on their way. Sprint spun off its landlines in May 2006 under the name Embarq, while Alltel, after beefing up its landlines by acquiring Valor Communications, divested the unit under the name Windstream in July 2006.

An end-run around the phone

Cell phones aren't the only way consumers are making calls these days—Voice over Internet Protocol (VoIP), offered by companies like Vonage and Skype, allows users to turn their personal computers into telephones by sending voice data over a broadband connection in the same way other data is sent online. Growth in the VoIP market has been exponential: in 2005 Internet phone subscribers in the U.S. went from a mere 1.3 million to 4.5 million, according to TeleGeography, an industry research group (they also predict that there will be 19 million VoIP users by 2010).

Bypassing questions of local and long distance networks entirely, VoIP providers allow complete number portability—a subscriber in Iowa, for instance, could have a (212) Manhattan area code. (She would be all set if only the place in Chinatown with the good kung pao chicken would deliver that far.) The technology is also advantageous in terms of cost. Thanks to the FCC, VoIP is exempt from some of the taxes and regulations with which regular phone carriers are saddled. But—of course—the major telecoms are busy on Capitol Hill, trying to level the playing field. In June 2005 the FCC ruled that VoIP companies had to contribute, just like any other phone company, to the Universal Service Fund, designed to keep costs down in rural and low-income areas. The contributions to this fund will presumably be passed on to consumers in the form of higher rates.

A job market roller coaster

The numbers are intimidating: telecom seems to thrive on sudden booms and equally rapid readjustments. By some estimates, the industry slashed 300,000 jobs during the troubled period beginning in late 2000. Companies also feel compelled to trim excess fat when they merge—the 2006 MCI-Verizon merger, for example, resulted in the elimination of some 7,000 positions. Even with increased demand for telecom services, the U.S. Department of Labor's Bureau of Labor Statistics (BLS) says that employment in the industry is expected to decline by 7 percent between 2004 and 2014.

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www.cox.com/CoxCareer/



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 Fax: (501) 905-5444
www.alltel.com

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 San Antonio, TX 78205-2233
 Phone: (210) 821-4105
 Fax: (210) 351-2187
www.att.com

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 Atlanta, GA 30309-3610
 Phone: (404) 249-2000
 Fax: (404) 249-2071
www.bellsouth.com

BT Group plc

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 81 Newgate Street
 London EC1A 7AJ
 United Kingdom
 Phone: (44-20) 7356-5000
 Fax: (44-20) 7356-5520
www.btplc.com

Charter Communications Inc.

12405 Powerscourt Drive
 Suite 100
 St. Louis, MO 63131-3660
 Phone: (314) 965-0555
 Fax: (314) 965-9745
www.charter.com

Cingular Wireless

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 5565 Glenridge Connector
 Atlanta, GA 30342
 Phone: (404) 236-6000
www.cingular.com

Comcast Corporation

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 Phone: (215) 665-1700
 Fax: (215) 981-7790
www.comcast.com

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 Corning, NY 14831-0001
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 Fax: (607) 974-5927
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Nortel

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 Brampton, Ontario L6T 5P6
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 Phone: (44-870) 376-8888
 Fax: (44-20) 7984-1601
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Sprint Nextel Corporation

2001 Edmund Halley Drive
 Reston, VA 20191
 Phone: (703) 443-4000
www.sprint.com

Verizon Business

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 Phone: (703) 996-5600
 Fax: (212) 885-0570
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The Connection
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United Kingdom
Phone: (44-1635) 33-251
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Transportation and Airlines

Transportation Industry Overview

Planes, trains and ... trucks and buses

The vast transportation industry carries people and products (safely and on time, of course) to destinations around the globe—no small feat. Because the economy is intimately connected to getting things from where they're made to where they're bought, the transportation sector, especially express services like UPS and FedEx Kinko's, are considered a bellwether for the economy's health on both domestic and global levels. The industry can be broken into a handful of sectors: airlines; air cargo and express delivery carriers; trucks; railroads; and buses.

Carrying the load

Unlike air travel as a whole, the air cargo business remains relatively stable, with major carriers posting profits even during 2001 and 2002. Still, a few cargo carriers, including Arrow and Atlas, were forced into bankruptcy court alongside their passenger carrier counterparts. UPS, FedEx Kinko's and DHL dominate the express delivery sector, all three operating their own modes of transportation and leasing space and services on other cargo haulers' vehicles. The Internet boom has had both a positive and negative effect on the industry: while the rise in e-mail has curtailed the shipping of smaller documents, more and more Internet shoppers, online retailers and small businesses are using express delivery companies for direct shipping services and supply chain management.

Many of the challenges the sector faces, including tighter security requirements, high fuel costs and the need to replace an aging fleet of planes, mirror those on the passenger side. Others are specific to the air cargo industry—for instance, the Air Line Pilots Association (ALPA) worries that international shippers may begin routing cargo through Canada and Mexico in response to the new security restrictions, meaning reduced activity in the domestic market. Air cargo services also have to contend with other forms of transport, like ships and trucks. Despite this, the International Air Transport Association (IATA) predicts that worldwide demand for air freight will increase by more than 6 percent from 2005 to 2009.

The world delivered (on time)

In the fiercely competitive delivery market, where the industry leaders vie for massive corporate contracts as well as business from individual consumers, marketing has become a hardball game. FedEx, for one, has strengthened its market position by diversifying, namely through its \$2.4 billion buyout in January 2004 of document services provider and copy shop chain Kinko's. As of 2005, there were 1,400 FedEx Kinko's locations worldwide, and the company teamed up with Microsoft to add a "Print FedEx Kinko's" extension to its Office suite of programs, which allows a document to be remotely printed at a local FedEx Kinko's. The company, with approximately 70,000 ground vehicles and an air fleet of 671 planes, operates different express, ground and freight units. UPS, on the other hand, has only 267 planes (making it the ninth-largest airline in the world, according to the company) but 120,000 ground vehicles. Even if UPS lags in the number of cargo planes, it's still the market leader in the U.S., with 47 percent of market share and a revenue of \$42 billion in 2005. (FedEx is not far behind, though, with a revenue of \$29 billion and 31 percent of the market).

Globally, the German logistics and express delivery firm DHL, run by German postal entity Deutsche Post, has the highest revenue, some \$57 billion in 2005. The company made aggressive steps in 2003 to solidify its position in the U.S. market, where it acquired Airborne Inc. for \$1.1 billion, securing its No. 3 place domestically and further strengthening its dominance in the world market for express delivery services overall. Meanwhile, FedEx Kinko's and UPS attempted to beat back the upstart by challenging DHL on regulatory grounds, particularly citing a restriction barring foreign companies from controlling U.S. airlines. As such, DHL's airline was spun off from the company not long after its acquisition.

The companies have also grown overseas: FedEx Kinko's picked up DHL's Global Express Guaranteed operations in July 2004, while rival UPS bought direct control of a jointly run Chinese delivery company, Sinotrans Group, for \$100 million in December 2004. UPS, with an eye to increasing services to Japan, also swallowed the remaining stake of joint venture (with Yamato Transport Co.) Yamato Express Co. earlier that year.

Greening "Brown"

Both UPS and FedEx have taken steps recently to "green" their ground service fleets, replacing diesel vehicles with more environmentally friendly options like compressed natural gas and electricity. FedEx is also raising the green stakes by buying a percentage of the power for its retail locations from renewable sources and increasing the amount of recycled content in its packaging. While the companies get PR points for their efforts, what's really driving the green movement is, well, the green—cash, that is. Along with attracting environmentally-sensitive consumers, hybrid electric vehicles use much less fuel than traditional cars, reducing fuel costs by as much as half.

Keep on truckin'

Express delivery services also share ties—and in some cases overlap—with the trucking sector, which in 2005 alone handled 10 billion tons, or 69 percent of the volume of freight in the U.S. Dominated by bulk truckers like Quality Distribution, JB Hunt and Yellow Roadway (which recently beefed up its business with the May 2005 purchase of supply chain management firm USF for \$1.5 billion), the industry is seeing increased demand for its hauling services, with 2005 sales of \$623 billion.

According to the Bureau of Labor Statistics (BLS), some 3.2 million people (2.5 million of which are self-employed) worked as truck drivers in 2004, a number that is expected to increase between 9 and 17 percent over the next several years. Drivers' responsibilities vary depending on the length of their routes and the nature of the goods they carry. Some drivers specialize in shorter routes where they also act as salespeople and solicit business while they make their deliveries, while others specialize in driving long distances and may be away from home for days or weeks at a time. Some trucking jobs require loading and unloading the truck, and so drivers must be in good physical shape and able to lift heavy objects. In order to drive trucks over a certain weight, operators must obtain a CDL license from their home state, and some states and employers require additional training, depending on what the truck is loaded with. Truck drivers must have a clean driving record and good vision and hearing; people with certain medical conditions are prohibited from driving trucks across state lines.

Long-haul truckers will be in high demand as the amount of freight moving across the country continues to grow. Statistics from economics consulting firm Global Insight suggest the number of drivers needed will rise by over half a million in the next decade. And according to a June 2005 report by the American Trucking Association, the long-haul, heavy-duty truck transportation industry is currently experiencing a national shortage of 20,000 drivers—a number that could swell to 110,000 by 2014—in what many in the industry consider the tightest driver market in over 20 years.

The trucking sector also overlaps with the railroad world, with giants like JB Hunt and Schneider International teaming up with old hands on the rails such as Union Pacific, Norfolk Southern, CSX and Burlington Northern Santa Fe. With new technologies allowing real-time cargo tracking and time-specific delivery, this sector of the transportation industry is expected to become increasingly integrated. As the economy grows, both rail and truck transport services will add jobs in order to accommodate the increased quantity of goods in circulation.

Working on the railroad

While the shipping portion of the rail sector has continued to chug along, the passenger train sector has contracted dramatically in previous decades. In fact, the railroads have been in decline since the advent of the automobile and the Federal Aid Highway Act of 1956. In the 1960s, it was dealt a heavy blow when the U.S. Postal Service turned to trucks and airplanes

for its first-class shipping needs. Following 1970s legislation, Amtrak took over the majority of U.S. passenger trains under its National Railroad Passenger Corporation umbrella—though the operator still has trouble turning any sort of profit; the company, after all, cannot compete with the speed offered by air lines or low fares by bus companies. Therefore, with dwindling passenger rolls and increased operating costs, Amtrak has become increasingly subsidized—the organization had taken in \$29 billion in government handouts by 2006, and was operating at a loss of over one billion dollars per year in 2004 and 2005. Amtrak isn't the only railroad running at a loss: the Long Island Railroad (LIRR), the busiest commuter rail line in the U.S., had posted annual losses of \$1 million by July 2006.

It should be noted that almost no form of public transport is self-supporting. All get regular infusions of capital from both states and the federal government, either directly or, in the case of bus companies, in the form of highway maintenance. There is a great deal of carping in the government and the media about the money spent on Amtrak, but, according to the Bureau of Transportation Statistics (BTS), in 2002 (the latest year for which complete data is available) the government gave Amtrak slightly over \$1 billion, while giving \$7.7 billion in subsidies to maintain highways, airlines and airports.

As of 2004, the BLS reports that rail transportation workers held 112,000 jobs in the U.S. Occupations in the sector include conductors and yardmasters, engineers, brake, signal, and switch operators, and subway and streetcar operators. Engineer positions are almost always filled from within a railroad's ranks and require good vision, hearing and extensive training. Almost 80 percent of the employees in this industry are unionized. While employment in intercity trains is likely to decline, the BLS predicts demand for subway and bus operators to increase as the population in cities become increasingly dense and demand for public transport grows.

On the bus

For long-haul passenger travel, about the only thing cheaper than a bus is sticking out your thumb. Intercity buses, also known as motor coaches, provide regular service to more than 42,000 U.S. communities. According to the American Bus Association (ABA), more passengers travel by motor coach in the U.S. than on any other commercial mode of transportation. The bus sector is unique in its composition: unlike the heavily subsidized rail and airline sectors, motor coach companies are more likely to go it alone (though the industry received about \$25 million in grant funding for security following September 11).

There are more than 4,000 bus companies on the roads in the U.S., many of which are small, entrepreneurial operators—90 percent run fewer than 25 buses, the ABA reports. Major operators include Trailways, which has been around for nearly 70 years and operates a group of 65 member companies, and Greyhound, founded in 1914 and acquired in 1999 by Laidlaw Inc. As insurance rates have increased tenfold in recent years, access to affordable coverage is a key challenge faced by the industry, even pricing some operators out of the market.

Airline Industry Overview

A volatile industry

The airline industry consists of companies that move people and cargo with planes. The International Air Transport Association (IATA) claims that this \$450 billion worldwide industry stimulates 8 percent of global GDP through tourism, shipping and business travel. But despite its enormous contribution to world commerce, the industry has historically gone through dizzying booms and alarming busts as it reacts to changes in regulation and the economy. Currently, airlines are still trying to dig themselves out of the hole caused by September 11. IATA says the imposition of security measures since then has cost the industry an average of \$5 billion per year. Spats with labor unions, troubles with underfinanced pensions, high jet fuel prices and a string of bankruptcies, from which some carriers were still emerging as late as 2006, have caused further

havoc. Nevertheless, *The Economist* thinks that once these issues have been resolved (no easy task), the airlines will be in a position to expand.

Cleared for takeoff

The airline industry took to the skies (pun intended) following the Wright brothers' first successful flight in 1905. As with many new technologies, airplanes were first used extensively in a war—namely, World War I, for reconnaissance, bombing and aerial combat. Following the war, when the U.S. found itself with a surplus of military aircraft and pilots with not much to do, the postal service opted in 1918 to use them to start a transcontinental air mail service, which ran from New York to San Francisco. To keep costs down, 12 spur routes were spun off to independent contractors—thus were the familiar friendly sky-flying companies of American Airlines, United Airlines, TWA and Northwest born.

Passenger flights did not become a reality until Ford introduced a 12-seat plane, which made carrying people potentially profitable. Pan American Airways, the first airline with international destinations, was founded in 1927, with other airlines adding international routes in the 1940s. Remarkably, airlines remained generally profitable during the Great Depression. Following that period, World War II brought many advances to the civilian air transport sector. Innovations initially intended for bombers made passenger planes larger, faster, able to carry heavier payloads and to fly at higher altitudes. The 1970s saw the introduction of supersonic air travel with the advent of the Concorde—which is now defunct.

Big trouble for the Big Six

Since September 11, Congress has given well over \$20 billion to the airline industry in the form of reimbursements for losses incurred while planes were grounded following the attacks, monetary help for new passenger and plane security requirements, and pension funding relief. But many of the industry's major players were forced to shoulder massive debt loads to continue operating, on top of debt they had been accumulating since even before the terrorist attacks. Of the "Big Six"—the *grandes dames* of the American airline industry, United, US Airways, American, Northwest, Continental and Delta—all but two, Continental and American, have been forced to file for Chapter 11. Smaller airlines including Great Plains, Hawaiian, Midway, National, Sun Country and Vanguard have also shown up in bankruptcy court.

Airline aid

Though passenger confidence continued to grow in the years following the terrorist attacks, and an improved economy bodes well for the travel industry as a whole, the industry's red ink continues to flow: according to a June 2004 Senate report, the industry carried combined debts of more than \$100 billion as of that year, with much of it due by 2006. As such, major carriers continue to lobby the feds for financial support in the form of subsidies and loans. Delta and Northwest are currently pleading with members of Congress to pass legislation allowing the airlines to stretch their multi-billion dollar pension payments over a 25-year period. As it stands now, Northwest would contribute \$900 million in pensions in 2006, while Delta would give up \$500 million—amounts neither airline can afford. In order to force lawmakers into passing the bill, Delta and Northwest are threatening to terminate pension plans that cover a combined 86,000 employees—a potential political disaster for members of Congress.

Looking up?

After industry profits reached a nadir in 2001 and 2002, business—if not profit—is showing signs of recovery. According to the IATA, a stronger world economy saw passenger traffic rise by 7 percent between 2005 and 2006, and air freight experienced a 5 percent gain. In order to accommodate this increased demand for air travel, and to lower their fuel expenditures, airlines are snapping up new, more fuel-efficient planes. The IATA predicts losses for 2006 will be in the \$3

billion range (which, though not great, is lower than the \$5 billion lost in 2005). Assuming oil prices stabilize, the industry should be back in the black in 2007.

The industry is being kept in the red by a combination of factors more complex than the Bernoulli effect. Air carriers were hit hard by rising fuel costs, with jet fuel prices exceeding \$90 per barrel. Industry players estimate that if oil prices stay high, airlines will pay \$21 billion more for fuel in 2006 than they did in the previous year. Labor disputes and underfinanced pensions have also been expensive problems for many carriers, at the same time as savvy consumers have been taking advantage of such services as Expedia and Orbitz to grab the lowest fares. Some carriers are playing to the budget travel crowd. Southwest just introduced a program called Ding which causes the customer's computer to make noise when low fares to specified destinations are released.

Overall, costs associated with air travel dropped significantly over the past year, as a result of price competition and attempts to keep ticket prices low despite high fuel costs. Industry belt-tightening seems to be working. The IATA reports that the industry break-even fuel price went from \$22 per barrel in 2003 to \$50 per barrel in 2005, though with crude trading at nearly twice the break-even price, it seems that airlines may still have a ways to go.

A global network

Around the world, many airlines still are heavily subsidized—or owned outright—by their home nations. While this has been a successful setup for many, others haven't been so lucky—Swissair and Belgium's airline, Sabena, both crumbled when their respective governments couldn't keep up with demands for subsidies. Global alliances have been formed between subsidized international and U.S. carriers to avoid some regulatory issues and to maximize profits by sharing resources, including routes and marketing strategies. Well-known alliances include Oneworld, an alliance between American Airlines and British Airways, and SkyTeam, a partnership made up of Delta Air Lines, Air France and AeroMexico. Such partnerships aren't always successful—an alliance between Dutch carrier KLM and Alitalia fell apart, for instance, after the Italian airline had trouble securing funding from its government patrons.

Partnerships aside, the airline industry remains remarkably competitive, and in today's tough climate, it's everyone for themselves. The only major merger between top airlines in the past few years was the early 2004 acquisition of KLM by Air France. Tight regulatory controls in the U.S. make it tough for major domestic carriers to merge, even if the companies involved were healthy enough to consider doing so. A plan to join United Airlines and US Airways was the last such proposal to be floated, and it was shot down due to antitrust regulations. The US Airways name showed up again in merger talks, linked to America West for \$1.5 billion, and the two companies made it official in September 2005. Despite the mergers, size is no guarantee of profit. Four of the Big Six have gone into bankruptcy since 2001, while smaller Southwest has maintained its profitability, largely by an aggressive program of hedging fuel prices.

Going regional

Regional airlines, which benefit from smaller, newer jets and lower operating costs than the domestic giants, have gained ground in recent years, becoming the fastest-growing segment of the airline market. Approximately 25 to 30 regional, or commuter, carriers operate in the industry today, according to the Bureau of Labor Statistics. Recent statistics from the Regional Airline Association reveal that one in five domestic airline passengers travel on a regional airline, and that the regional fleet makes up one third of the U.S. commercial airline fleet on the whole. The big carriers have taken notice, and many now have controlling interests in newer regional airlines—Delta controls Delta Express, Atlantic Southeast and Comair, for instance, while American has American Eagle. The trend is reflected in Europe, too. Both globally and domestically, regional airlines benefit from such partnerships as alliances with major carriers allow the upstart regionals access to major airport hubs. In some cases, however, regional and low-budget airlines have skirted the hub question altogether by choosing to operate out of slightly out-of-the-way airports—Southwest's use of Islip airport, in a suburb of New York, and JetBlue's

adoption of Long Beach, near Los Angeles, are two examples. And in other cases, regional airlines have decided to spread their wings and join the burgeoning low-cost boom.

The budget boom

The budget airline sector—consisting of top performers like Southwest Airlines and JetBlue, plus a growing number of upstarts—has gotten a good deal of attention lately. But budget flight isn't a new phenomenon in the industry—in fact, Southwest has been around since 1971. The difference is in the branding and public acceptance of these carriers, fueled in part by Southwest's customer-centric approach, and by customers' reduced service expectations post-September 11. Expanded routes have helped, too—where once low-budget carriers limited their flights to relatively short hauls in regional markets, today's top discount airlines regularly offer cross-country, and even international, flights. The budget carrier phenomenon has rocked Europe, too, where more than 50 low-cost carriers were in operation in 2004, compared to just four in 1999. European customers have warmed up to the budget boom as well. British-based easyJet increased its passenger flow more than eight-fold between 1999 and 2004, while low-cost carrier Ryanair, operating out of Ireland, ranked as one of the top performers in the industry worldwide, second in market capitalization only to Southwest as of mid-2004, according to Yahoo! Finance.

Some of the larger airlines have decided to take advantage of the low-cost boom, such as United's Ted and Delta's Song, but to not much avail; Song, in fact, was reabsorbed into Delta in 2006, three years after its first plane took off. Despite Song's failure, airlines around the world have realized that there just aren't as many passengers willing to pay for five-star air travel these days—at least, not enough to make these services profitable for most carriers. The demise of the Concorde, in 2003, was seen by many analysts as yet another indication of this trend. Instead, consumers prefer to pick and choose their perks. An in-flight cocktail on JetBlue will cost you the same, but XM radio and satellite TV is free. Charging for amenities that previously came gratis allows carriers to keep ticket prices low, yet still turn a profit.

Cutting costs

Above all, cost savings are seen as key to the success of low-budget carriers. One way air carriers measure their fiscal health is through cost per available seat mile (or CASM), a complex formula involving airplane capacity, operating costs, route lengths and other factors. Whereas American Airlines spends about 9.4 cents for each seat on each mile flown, budget competitors like Southwest and JetBlue lighten their loads with CASMs of 7.6 cents and 6.4 cents, respectively, according to an MSNBC article from December 2003. Those pennies add up over time, and so-called "legacy" carriers are under pressure to pinch them ever harder. But with more liberal work rules and a less-senior workforce overall, low-cost carriers beat their established rivals in terms of labor costs.

Investing in a dream(liner)

Major carriers hope to save money in the future by investing in new planes that offer a lower cost of ownership and operation. In early 2004, Boeing got the go-ahead from Japan's All Nippon Airlines to begin work on a new 787 Dreamliner passenger jet, which promises fuel savings of up to 20 percent—other carriers' orders are expected to follow. Meanwhile, Airbus, the French firm and Boeing's rival for No. 1 aircraft maker in the world, unveiled a brand new high-scale jumbo jet, the A380, at the start of 2005 at a gala event during the Le Bourget air show in Toulouse, France. Designed to comfortably seat 555, the A380 rocked the airline industry and represented a joint effort with France, Britain, Germany and Spain, all of whom contributed to the 10-year, \$13 billion program that designed the plane. The double-decker leviathan, the largest plane ever built, boasts a 262-foot wingspan and extra space companies can use to install bedrooms, gyms, bars and lounges. The conservation end, though, is where the A380 packs its biggest punch: its carbon fiber components and fuel-efficient

technology are estimated to match or exceed Boeing's 20 percent fuel savings, and slash cost per passenger. Delivery of the planes has already been delayed six months by technical issues.

Other cost-cutting measures in the airline industry overall include streamlining fleets and retiring older planes; cancelling unprofitable routes; greater efficiency in procurement processes involving suppliers; and slashing commissions once paid regularly to middlemen such as travel agencies. Many see technological advancements as their great hope—according to a January 2004 *BusinessWeek* article, Continental hopes to save \$500 million annually in coming years partly by investing in Web-based check-in systems and wireless bag tracking.

Labor pains

According to the Bureau of Labor Statistics (BLS), labor costs make up roughly 38 percent of many airlines' operating costs—that's around 40 cents for every dollar spent by an air carrier. Passenger safety regulations, a workforce made up of highly specialized and rarely cross-trained professionals, half of whom are unionized, make it tough for airlines to trim costs from their labor budgets. One way they've done this is by cutting workforces to the bare bones. Following September 11, Continental Airlines and US Airways were the first to make dramatic cuts, laying off about 20 percent of their respective workforces and paring flight schedules. Most other carriers followed suit.

Industry employment is largely at the mercy of the economy, though the BLS expects jobs to increase somewhat independently due to a growing population and greater demand for air travel. The BLS predicts employment growth initially in low-cost and local carriers, with larger airlines following the trend as they cut costs post-bankruptcy.

There are several different categories of employment within the airline industry: flight attendants and customer service personnel, ground crews and pilots. The latter category represent some of the most highly-paid workers in the country, and so competition for these jobs is understandably intense. (Not as much for flight attendants, customer service personnel and ground crews.) The more FAA licenses a pilot has—that is, the more flying time he has on complex, modern equipment—the more in demand his services will be. For this reason, military-trained pilots are particularly desirable; however, recent military actions mean they are in short supply.

Civilians can learn to fly at a private flight school and gain experience on progressively larger aircraft; they may work their way up from private jets to regional carriers and from there to the larger airlines. Initially, a newly hired pilot will be a flight engineer or co-pilot, assisting the captain with communications with control towers, instrument readings and flight duties. Work assignments for flight attendants and pilots are frequently given on a seniority basis, with the most senior employees having the pick of the litter. New hires, therefore, must be prepared to receive less desirable assignments initially.

Transportation and Airlines Employer Directory

American Airlines

4333 Amon Carter Boulevard
Fort Worth, TX 76155
Phone: (817) 963-1234
Fax: (817) 967-9641
www.aa.com

Amtrak

60 Massachusetts Avenue, NE
Washington, DC 20002
Phone: (202) 906-3000
Fax: (202) 906-3306
www.amtrak.com

British Airways

Waterside, Harmondsworth
London, UB7 0GB
United Kingdom
Phone: +44-08708509850
Fax: +44-20-8759-4314
www.ba.com

CNF Inc.

3240 Hillview Avenue
Palo Alto, CA 94304
Phone: (650) 494-2900
Fax: (650) 813-0160
www.cnf.com

Continental Airlines, Inc.

1600 Smith Street
Houston, TX 77002
Phone: (713) 324-5000
www.continental.com

CSX Corporation

500 Water Street, 15th Floor
Jacksonville, FL 32202
Phone: (904) 359-3200
www.csx.com

Delta Air Lines, Inc.

P.O. Box 20706
Atlanta, GA 30320-6001
Phone: (404) 715-2600
Fax: (404) 715-5042
www.delta.com

DHL Holdings (USA)

1200 South Pine Island Road
Plantation, FL 33324
Phone: (954) 888-7000
Fax: (954) 888-7310
www.dhl.com

Enterprise Rent-A-Car Company

600 Corporate Park Drive
St. Louis, MO 63105
Phone: (314) 512-5000
Fax: (314) 512-4706
www.enterprise.com

FedEx Corporation

942 S. Shady Grove Road
Memphis, TN 38120
Phone: (901) 818-7500
Fax: (901) 395-2000
www.fedex.com

The Hertz Corporation

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Park Ridge, NJ 07656-0713
Phone: (201) 307-2000
Fax: (201) 307-2644
www.hertz.com

JetBlue

118-29 Queens Boulevard
Forest Hills, NY 11375
Phone: (718) 709-3026
www.jetblue.com

Laidlaw International, Inc.

55 Shuman Boulevard, Suite 400
Naperville, IL 60563
Phone: (630) 848-3000
Fax: (630) 579-6438
www.laidlaw.com

Massachusetts Port Authority

One Harborside Drive, Suite 200S
East Boston, MA 02128
Phone: (617) 428-2800
www.massport.com

Norfolk Southern Corporation

3 Commercial Place
Norfolk, VA 23510-2191
Phone: (757) 629-2600
Fax: (757) 664-5069
www.nscorp.com

Northwest Airlines Corporation

2700 Lone Oak Parkway
Eagan, MN 55121
Phone: (612) 726-2111
Fax: (612) 726-7123
www.nwa.com

Sabre Holdings Corp.

3150 Sabre Drive.
Southlake, TX 76092
Phone: (682) 605-1000
Fax: (682) 605-8267
www.sabre-holdings.com

Southwest Airlines

2702 Love Field Drive
Dallas, TX 75235
Phone: (214) 792-4000
Fax: (214) 792-5015
www.southwest.com

UAL Corporation

1200 E. Algonquin Road
Elk Grove Township, IL 60007
Phone: (847) 700-4000
Fax: (847) 700-4081
www.united.com

U-HAUL INTERNATIONAL, INC.

1325 Airmotive Way, Suite 100
Reno, NV 89502
Phone: (775) 688-6300
Fax: (775) 688-6338
www.uhaul.com

Union Pacific Corporation

1400 Douglas Street
Omaha, NE 68179
Phone: (402) 544-5000
Fax: (402) 271-6408
www.up.com

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Atlanta, GA 30328
Phone: (404) 828-6000
Fax: (404) 828-6562
www.ups.com

US Airways Group, Inc.

2345 Crystal Drive
Arlington, VA 22227
Phone: (703) 872-7000
Fax: (703) 872-5134
www.usairways.com

Wabash National Corp.

1000 Sagamore Parkway South
Lafayette, IN 47905
Phone: (765) 771-5300
Fax: (765) 771-5474
www.wabashnational.com

Yellow Roadway Corporation

10990 Roe Avenue
Overland Park, KS 66211
Phone: (913) 696-6100
Fax: (913) 696-6100
www.yellowroadway.com

Werner Enterprises, Inc.

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Fax: (402) 895-6640
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Venture Capital

The Financial Industry and Venture Capital

Where does VC fit into the world of finance? The financial industry can be divided into two general segments: the buy-side and the sell-side. Sell-side refers to those financial firms that have services to sell, such as investment banks, brokerages, and commercial banks.

For instance, when a large company wants to sell stock on the public stock exchanges, an investment bank's corporate finance department handles the legal, tax, and accounting affairs of the transaction as well as the sale of those securities to institutional or individual investors. For providing these services, the investment bank receives a fee (between 2 percent and 10 percent of the money raised by selling stock). An investment banking firm's primary motivation is to sell such services, characterizing them as sell-siders.

Brokerages are paid a fee for the service they provide of buying and selling stocks. Commercial banks are paid for managing deposit accounts, making and then managing loans, etc. Again, they sell these services, so they are sell-side firms.

Venture capital firms, on the other hand, are on the buy-side because they control a fund or pool of money to spend on buying an equity interest in, or assets of, operating companies.

For the sake of this discussion, most buy-side venture capital firms have only one way to realize a return on their investment: selling their ownership stake to another private investor, a corporation (trade sale) or to the public markets for more money than they paid (often termed to be "in the money"). While some later-stage private equity shops invest in or acquire companies for their cash flow potential, venture capital is about building young companies and finding an exit (liquidity event) on the back side for "x" times their original investment. Descriptions of each segment of the buy-side are included below. Keep in mind that these definitions are intended to be very general in nature and that many buy-side organizations cross organizational boundaries.

Friends and family

Sometimes referred to as "friends, family and fools," this is usually the first source of funding for startups at the idea stage of development. The amounts invested per individual are quite small, averaging \$5,000 to \$10,000. These people may not have an in-depth understanding of the business, product, technology or market, and are simply making an investment in someone they know. While this is probably the easiest money for an entrepreneur to find, it can also be bittersweet. If a startup fails, telling Aunt Edna that she's lost her nest egg could be the low point of one's career.

Angels

These are high net-worth individuals who normally invest between \$15,000 and \$1 million in exchange for equity in a young company throughout the seed and early stage rounds, averaging \$50,000 to \$500,000. Angels prefer to invest within their immediate geographic area, and on average within one day of travel. According to businessfinance.com, angels fund an estimated one-seventh of the 300,000 start-up/early growth firms in the U.S. They are often the first investor segment who have the opportunity to sit on the board of directors and contribute experience and contacts, guiding young companies through the difficult initial stages of growth. That said, most of the value added by angel investors occurs in the pre-institutional (or Series A) rounds of funding. As the professional investors come into play, venture capitalists take over board seats previously held by angels.

Angels can be doctors, lawyers, former investors, though increasingly they are former entrepreneurs who have had a lucrative exit in their chosen professional field. Microsoft co-founder and multi-billionaire Paul Allen has made headlines for his angel investing as well as his investments through his VC firm, Vulcan Ventures. Intel co-founder Andy Grove has made angel

investments in numerous companies, including Oncology.com. Given the large number of new companies seeking funding as well as the rise in the number of wealthy individuals, in recent years the industry has seen the emergence of angel groups. These investor alliances create more structure for angel investors, and a more efficient conduit for moving startups along from seed funding to professional venture investors. Perhaps the best-known group of angels is Silicon Valley's "Band of Angels," a formal group of about 150 former and current high tech entrepreneurs and executives who meet monthly to consider pleas from three start-ups for venture financing. This group has injected nearly \$100 million across some 150 startups. Angels are often involved with hiring, strategy, the raising of additional capital, and fundamental operating decisions. These alliances also allow for better coordination of due diligence in "vetting" new deals. Angels are not without their own issues, however. Collectively, angel investors have been accused of being fair weather friends; one of the first sources of private equity to dry up when public markets fall or macroeconomic conditions deteriorate. With less money to invest across fewer deals than their vc brethren, many of these individuals have a lower tolerance for losses. This risk aversion is compounded by their generally lower position in the capital structure. While angel groups may be able to negotiate preferred stock instead of common, their equity rarely has the same level of preferences or security demanded by later stage investors. Though angels, of course, expect a significant return on their investment, they are also thrill-seekers of a sort—motivated by getting close to the excitement of a new venture.

High net worth private placements

Sell-side companies, such as investment banks, may organize a group of very wealthy individuals, corporations, asset management firms, and/or pension funds to make a direct investment into a private company. The amount raised from these sources is typically between \$5 million and \$50 million. In essence, the sell-side company enables investors to invest in the venture capital asset class.

While these transactions may include a traditional venture fund as part of the round, in many cases they do not. As a whole, investment banks have historically been seen as having less perceived value in the early stages of the venture process. Since early-stage investing is not Wall Street's core competency, the downside is that 1) the startup company may not benefit from the domain expertise, operational savvy and rolodex of the venture capital firm, and 2) the sell-side company takes a fee for its services, typically between 2 and 10 percent of capital raised. While there is a credible value proposition to using private placements and participation by investment banks in funding some types of deals, this is expensive money on several fronts.

Asset management firms and pension funds

These groups include a diverse collection of limited partnerships and corporations that manage between \$5 million to \$100 billion plus. Most focus on diversified investment strategies, typically with public instruments including stocks, bonds, commodities, currencies, etc. They rarely invest in private companies, due to the large amount of time required to find and execute a private transaction, as well as the ongoing commitment of time to monitor such an investment. Instead of directly participating in individual startup fundings, many will allocate 5% to 7% of total funds to higher-risk alternative investments like vc partnerships, hedge funds, and distressed turnaround situations. The California Public Employees' Retirement System (CalPERS) is one of the largest players in this space.

Leveraged buyout firms

These are limited partnerships or corporations that take over private or public firms using their own capital as equity, combined with debt (leverage) financing from third-party banks. After acquiring a company, the LBO firm normally changes management and strategic direction, or may divide and sell its assets. The size of LBOs ranges from a few million to many billions of dollars. These firms look and behave very much like venture capital firms, but their investments differ in size and purpose. Both LBOs and VCs fall under the umbrella descriptor "Private Equity."

Hedge funds

These are limited partnerships or corporations that buy and sell public market instruments including stocks, bonds, commodities, currencies, etc. These firms take bets on market fluctuations and are often considered high risk/high return investors. The size of these funds ranges from a few million to several billion dollars.

Trading

Sell-side companies such as merchant banks, commercial banks and investment banks have trading departments that control and invest huge sums of money into public markets. These groups also take relatively risky bets on market fluctuations.

Venture funds

Limited partnerships.

A Day in the Life: Venture Capitalist

7:00 a.m.: Arrive at the office.

7:01 a.m.: Read *The Wall Street Journal*, paying careful attention to the Marketplace section covering your industry focus.

7:20 a.m.: Read trade press and notice four companies you haven't seen before. Check your firm's internal database to see if someone else on your team has contacted the companies. Search the Internet to find out more. Of the four companies you find, only one holds your interest. Send yourself an e-mail as a reminder to call them during business hours.

7:45 a.m.: Clip out some interesting articles and put them in the in-boxes of other associates or partners with a note explaining why you found the information interesting. The other members of your firm have more expertise in the areas covered by the articles. You stay and talk for a few minutes with each of the people in their offices, exchanging the latest word about the people and technology you follow.

8:00 a.m.: Respond to e-mails or voice mails from the day before. People you are communicating with are primarily entrepreneurs, other VCs, and personal acquaintances.

9:00 a.m.: You attend a meeting with a group of entrepreneurs who want to make their pitch. You read the business plan for five minutes. One general partner (GP) sits in with you. The other GP, who planned to be there, cannot make it because he has a conference call with a portfolio company facing some challenges. The computer projecting the entrepreneur's presentation crashes, so you have to take their paper version of their presentation and work with your assistant to make four photocopies before the meeting can proceed.

During the 10-minute delay, the partner talks with the team informally, and learns more about the opportunity than he or she would in any one-hour presentation. You sit politely through the presentation, and identify the three critical issues facing the company. During the question and answer phase, you think of how to politely extract more information about those three issues, all the while evaluating whether you would want to work with this team or not.

In the end, you decide to make some calls to gather more information about the market, but you feel that there's a very low probability you would ever invest. You wish you could just kill the deal, but the management team is reasonable (though not great), the customer need they have identified may actually exist (you don't know first-hand, so you will need to call around), and you may learn something by taking it to the next step. Plus, in the back of your mind, you know the market for good deals is very competitive, and you don't want to reject a deal too quickly.

11:00 a.m.: Phone the people who called during your meeting. These people include entrepreneurs, analysts, other VC's, and your lunch appointment. You find out from another VC that the company you almost invested in two months ago was just funded by a competing firm. You wonder if you made a mistake. You find out from an entrepreneur you were hoping to back that he wants his son to be a co-founder and owner of the firm. You abandon all hope. You learn from an analyst that AT&T has decided to stop its trial of a new technology because it doesn't work, which creates an opportunity for companies with an alternative solution. You happen to know about two small companies, one in Boston, one in Denver, that have alternative solutions. You make a note to yourself to call them back to get a status report.

12:30 p.m.: Lunch with an executive recruiter. This person is very experienced in finding management talent in your area of expertise. You have kept in touch with her over the years, and try to see her every quarter to hear the latest buzz and to make sure she will be available when you need her services quickly. It's a fun lunch, freely mixing personal and professional information.

2:00 p.m.: Call new companies you have heard about over the last few days. Ideally, you could do this task a little bit every day, but you find you need to be in a friendly and upbeat mood to make these calls, so you batch them. Also, if you actually get in touch with the CEO, you may be on the phone for 90 minutes, so you need to have an open block of time. You leave the standard pitch about your firm on the voice mail of the CEO's of four other companies. You get through to one CEO, and although you can tell in the first five minutes that you won't be interested in investing, you talk for 30 minutes. You spend most of the 30 minutes probing about competitors who might be better than the company you're talking to and finding out more about his market space.

3:00 p.m.: You and a partner meet with a portfolio company on a conference call. The company is facing some challenges and you offer to screen executive recruiters to help find a new CFO for it. The GP offers to talk to two M&A firms to get a first opinion about what might be done to sell the company over the next six months. At the end of the call, the GP gives you three names and numbers of recruiters, which you add to your own two contacts.

3:30 p.m.: You call the recruiters, explaining the situation and asking about their recent experiences in similar searches. The critical element is whether the recruiters actually have time and interest in doing the search. You talk to two recruiters and leave voice mails for the other three.

4:30 p.m.: You make due diligence calls for a potential investment you have been following for two months. Last week you called the company's customers, and they seemed happy for the most part. Today, you are calling the personal references of the management team. The idea is to get as much negative information as possible. You need to discover any potential character or personality flaws any member of the team may have. VC firms are "due diligence machines," doing the hard work of making sure a company is what it says it is.

5:30 p.m.: You make calls to the West Coast. You also check your stocks and confirm dinner plans. You do some miscellaneous surfing on the Web to gather some articles about the technology areas you cover.

6:30 p.m.: You stand around the halls talking with other members of your firm, brainstorming and filling each other in about what's happening in your area.

7:00 p.m.: Dinner with two other young VCs downtown. You talk mostly about life, sports, travel and relationships, but also about the latest deals, cool business ideas, and recent successes. You find out that a competing firm just made 30 times their money on a deal you never saw. You also find out that a company you turned down which was invested in by someone else is about to go bankrupt. A train missed; a bullet dodged.

VC Uppers and Downers

Uppers

- There is a reason that very few people ever willingly leave their VC careers. Where else can you have so much fun investing other people's money (plus some of your own), while being "in the middle of it all"?
- You often get to be the one making decisions because you have money.
- Over the long term, financial security will cease to be an issue, because the job is well paying and you should eventually get "carry" or equity in the firm.
- You have access to the best minds—the people you work with are typically some of the smartest and most interesting. Successful venture capitalists have interests and hobbies as diverse as mountain climbing to playing jazz in nightclubs.
- Your job is to absorb and enjoy the positive creative energy of entrepreneurs and direct it toward successful execution.
- You could suddenly become rich if one of your companies does extremely well and you were able to co-invest or you have carry.
- You have access to the best information systems.

Downers

Because so many think of the venture capital industry as "the hot job to have," people often forget to question whether it is the right job for them. Here is a list of some of the negatives we hear from those who have worked in the industry for a while.

- Unless you work with a hands-on early-stage VC firm known for taking an active role in building successful companies, you don't have pride of ownership in anything. You're just an investor, not a builder.
- VC is a slow path to wealth compared with the immediate cash income you get in investment banking, hedge funds or even management consulting.
- It can be argued that venture capital is fundamentally a negative process. Because you reject 99 of every 100 plans, year after year, over time you focus on figuring out what is wrong with a company. You can then reject it and get on to the next deal. What is wrong with the management? The technology? The deal terms? The strategy? If you tend to have a contrarian disposition, after just a few years, that mentality may bleed into your life. What is wrong with my partners? What is wrong with my spouse? What is wrong with me? Oh, the angst! If this reaction hits too close to home, venture capital might not be for you. What fun is it to search through hundreds and thousands of business plans and ideas for that one rare gem, if you aren't an eternal optimist?
- Because you reject 99 of every 100 entrepreneurs, you can make some enemies, no matter how nice and helpful you try to be. No one likes rejection, and passionate entrepreneurs have long memories.

Venture Capital Employer Directory

Accel Partners

428 University Avenue
Palo Alto, CA 94301
Phone: (650) 614-4800
Fax: (650) 614-488
www.accel.com

Apax Partners

495 Park Avenue, 11th Floor
New York, NY 10022
Phone: (212) 753-6300
Fax: (212) 319-6155
www.apax.com

ARCH Venture Partners

8725 W. Higgins Road
Suite 290
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Phone: (773) 380-6600
Fax: (773) 380-6606
www.archventure.com

Austin Ventures

300 West 6th Street
Suite 2300
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Phone: (512) 485-1900
Fax: (512) 476-3952
www.austinventures.com

Benchmark Capital

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Phone: (650) 854-8180
Fax: (650) 854-8183
www.benchmark.com

Charles River Ventures

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Waltham, MA 02451
Phone: (781) 487-7060
Fax: (781) 487-7065

Draper Fisher Jurvetson

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Menlo Park, CA 94025
Phone: (650) 233-9000
Fax: (650) 233-9233
www.drapervc.com

Hummer Winblad Venture Partners

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Phone: (415) 979-9600
Fax: (415) 979-9601
www.humwin.com

JAFCO America Ventures

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Suite 310
Palo Alto, CA 94301
Phone: (650) 463-8800
Fax: (650) 463-8801
www.jafco.com

Kleiner Perkins Caufield & Byers

2750 Sand Hill Road
Menlo Park, CA 94025
Phone: (650) 233-2750
Fax: (650) 233-0300
www.kpcb.com

Mayfield Fund

2800 Sand Hill Road
Suite 250
Menlo Park, CA 94025
Phone: (650) 854-5560
Fax: (650) 854-5712
www.mayfield.com

Menlo Ventures

3000 Sand Hill Road, Building 4
Suite 100
Menlo Park, CA 94025
Phone: (650) 854-8540
Fax: (650) 854-7059
www.menloventures.com

New Enterprise Associates

1119 St. Paul St.
Baltimore, MD 21202
Phone: (410) 244-0115
Fax: (410) 752-7721
www.nea.com

Norwest Venture Capital

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Palo Alto, CA 94301
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Fax: (650) 321-8010
www.norwestvc.com

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Fax: (650) 854-2977
www.sequoiacap.com

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www.stpaulvc.com

TL Ventures

435 Devon Park Drive
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Wayne, PA 19087
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Fax: (610) 975-9330
www.tlventures.com

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APPENDIX

About the Author

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